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Improving Metacognitive Awareness and Authentic Teaching Practices through Scaffolding Goal Setting and Reflective Practices with ECD Majors at the Community College Level

Melanie Renee Yeschenko

IMPROVING METACOGNITIVE AWARENESS AND AUTHENTIC TEACHING PRACTICES THROUGH SCAFFOLDING GOAL SETTING AND REFLECTIVE PRACTICES WITH ECD MAJORS AT THE COMMUNITY COLLEGE LEVEL

A Dissertation

Submitted to the School of Education

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By

Melanie Renee Yeschenko

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Presented by:

Melanie Yeschenko
B.S., Indiana University of Pennsylvania, 1998
M.S.Ed, California University of Pennsylvania, 2002

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_____, Chair
Amy Olson, Ph.D.
Assistant Professor, Department of Educational Foundations and Leadership
Duquesne University

_____, Member
Anne Marie FitzGerald, Ed.D.
Assistant Professor, Department of Educational Foundations and Leadership
Duquesne University

_____, Member
Julia Williams, Ed.D.
Assistant Professor, Department of Instruction and Leadership in Education
Duquesne University

Program Director
Connie M. Moss, Ed.D.
Clinical Associate Professor, Department of Educational Foundations Leadership and
Director, Ed.D. in Educational Leadership Program
Duquesne University School of Education

ABSTRACT

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Dissertation supervised by Dr. Amy Olson

This research set out to enhance instruction for early education and child development majors in a community college setting in a manner that allows them to gain content knowledge while becoming more prepared to practice effective pedagogy in early learning classrooms. This study examined how metacognitive awareness changes throughout a semester with scaffolded goal setting and reflective practices. It investigated the types of goals students set for a specific learning task, as well as investigated their ability to apply reflective practice to their own learning and teaching practices. This research used a mixed method design to data collection with quantitative data from rubrics and an inventory and qualitative data from instructor journaling. Quantitative results indicated that students improved in some elements of goal setting and all assessed elements of reflective practice, along with improvements in metacognitive awareness. Qualitative findings also indicated that students improved in

metacognitive awareness and goal setting as a formal practice even though there was evidence of struggle in regard to the unfamiliarity of the goal setting practice itself and defining a time frame to achieve their goals. The goal setting and reflective practices within the course were helpful to the instructor. Each provided an opportunity for the instructor to support student learning and effectively use strategies to support achievement of the students in the course and in the early childhood field.

Keywords: community college, early childhood education, goal setting, metacognitive awareness, reflective practices, scaffolding

DEDICATION

To Alan,

Fate brought us together, but our love keeps us strong. Always and forever!

To Brandon and Mason,

I am proud to call myself a teacher, but I am even more proud to call myself your mom.

I love you with my whole heart and soul!

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A special thanks to my family and friends who endured this doctoral experience with me and never let me give up. Your praise, encouragement, laughter, and tears meant the world to me. I am blessed to have the most supportive people in my life, and I am humbled by your unconditional love.

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CHAPTER I: INTRODUCTION

General Overview

The purpose of this research is to enhance instruction for early education and child development (ECD) majors in a community college setting in a manner that allows them to gain content knowledge while becoming more prepared to practice effective pedagogy in early learning classrooms. The primary purpose of this work is to examine how ECD students' metacognitive awareness changes throughout a semester with instructionally-guided goal setting and reflective practices. The secondary purpose is to explore the quality of the goal-setting and reflection that occurs as a result of the scaffolded instruction. This study is grounded in the belief that critical development of metacognitive awareness is an avenue for ECD majors to gain a solid grasp of theoretical and content knowledge. By developing this metacognitive awareness specifically in the context of teaching, the theoretical knowledge that is foundational in the course can be applied as a repertoire of pragmatic practices to create effective early learning classrooms.

To increase effectiveness of ECD instruction at the community college level, we must increase ECD students' metacognitive awareness, an important skill that affects their future pedagogical practice. Metacognition is essential to productive learning, and Pintrich (2002) linked student learning and performance to metacognition.

In order to do this, we must first develop their ability to set goals in accordance with course learning outcomes and help them intentionally reflect on progress in meeting those goals in their teaching practice. Goal setting is a powerful component of metacognitive awareness (Green & Azevedo, 2007). ECD students who are supported in setting educational goals based on course objectives gain a personal connection with the learning and gain integral lifelong

learning (Bolhuis, 2003). By scaffolding ECD students in their goal setting, students are provided effective guidance in their learning process and in the transfer of that learning to their work with young children.

In addition to goal setting, intentional reflection is another important component of metacognitive awareness. Rodman (2010) indicated that it is a responsibility of college instructors to use deliberately structured reflection as a means for continued growth and development of their college students, and that reflective practice improves a pre-service teachers' pedagogical ability. Intentional reflection contributes to college students' building awareness of their knowledge, beliefs, and actions along with promoting metacognition in their teaching practices (Moon, 2006; Rodman, 2010). Eyler (2002) further argued that purposeful efforts to engage students in reflection must be taken while given opportunities to link their experiences, content knowledge, and assumptions to learning experiences.

As Figure 1 illustrates, this research scaffolds the development of metacognitive awareness of teaching by providing instructional support for goal setting and reflection with the goal of improving the practice of ECD students. This change looks to narrow the theory-practice gap within the early learning field. This would in turn provide a means to help improve the quality of early learning experiences for young children.

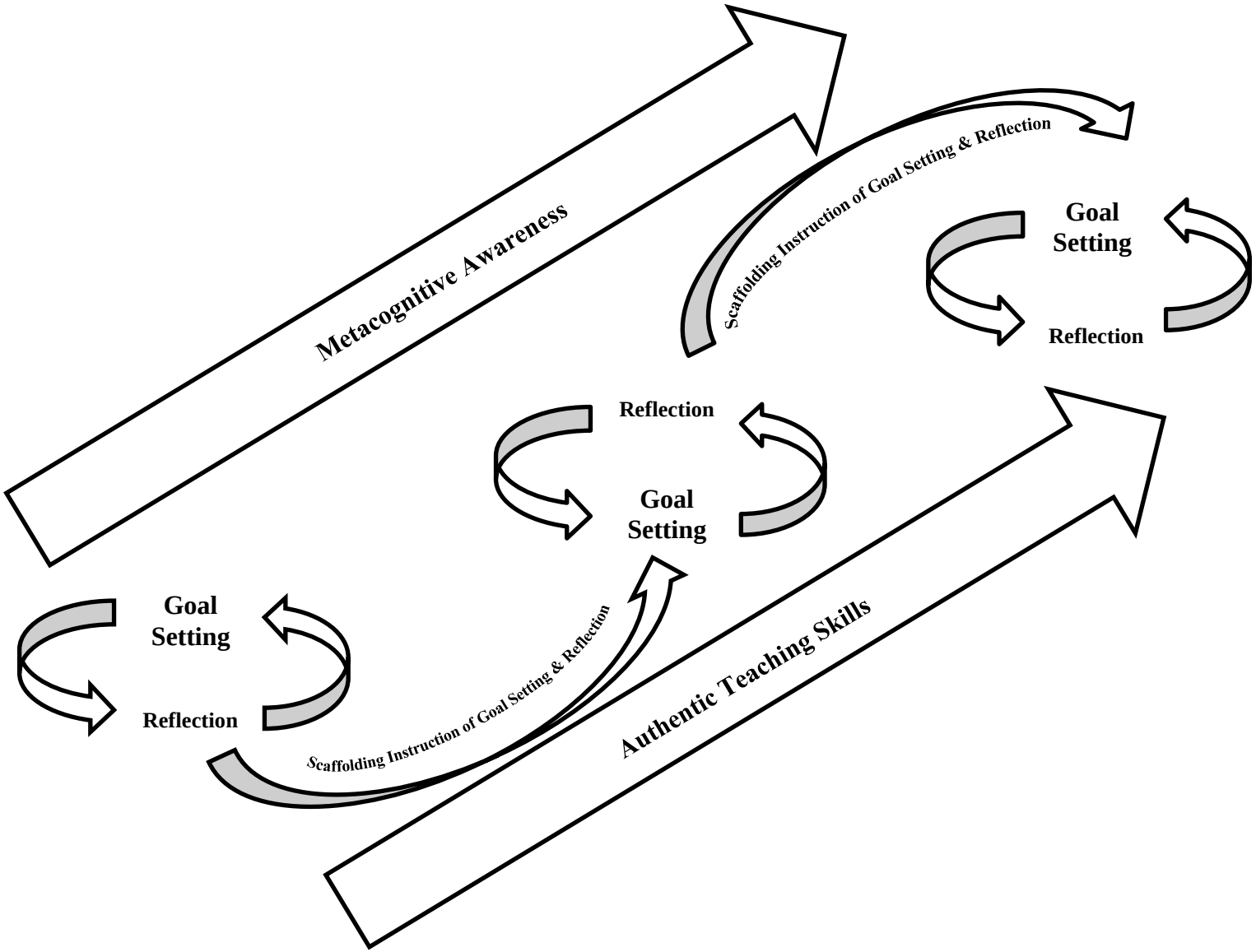


Figure 1. Instruction Scaffolding Community College Student Learning in Early Childhood Education Program

Importance of Early Childhood Focus

Quality early learning environments are essential to the development of young children. In fact, quality is consistently the single greatest concern about childcare, from consumers and parents, regardless of the families' income, education, gender, and/or marital status (National Association of Child Care Resource & Referral Agencies, 2010). The fact that quality early learning is not equitably accessible for all young children needs attention. The reasons for inaccessibility vary from not knowing the value of one early childhood service over another, to not having the proximity to a service on a daily basis, to not being able to afford services (Hyson & Tomlinson, 2014, p. 64). Whether a family is unaware of what quality early learning should be or they do know and have a barrier such as location or financial constraints, young children deserve our advocacy as professionals in the field.

Without a good start in early learning, young children do not thrive later on; early learning facilitates later learning, especially for those from disadvantaged backgrounds (Ackerman, 2005; ACT Research and Policy, 2013; Herzenberg, Price, & Bradley, 2005; Hyson & Tomlinson, 2014; Landry, 2005; National Association for the Education of Young Children, 2016; Peterson, 2012). Early learning is a way to develop lifelong learners, as it cultivates a child's interests and intellectual curiosity (ACT Research and Policy, 2013). This focus of developmentally appropriate practice for all young children and their approach to learning is the key to quality. Quality early learning is dependent upon this recognition of children as unique individuals (Biddle, 2012). Yet, when we look at early childhood, the standings are bleak. The National Institute of Child Health and Human Development (2006) reported that only an estimated 8% of children receive positive caregiving in a child care setting. This is despite the

overwhelming research evidence that supports the necessity of quality child care and education during the early years.

In K-12 schooling, Pennsylvania ranks eighth among the states in school achievement. With an average state ranking of a B-minus, at first glance it seems as if Pennsylvania is performing well in terms of educational programming. However once the data are disaggregated, and the focus is on the early education index, Pennsylvania currently earns a D-plus in the quality of early learning in pre-kindergarten and is 41st in the state rankings (Edwards, 2015). This is disheartening and unacceptable. Low quality early education negatively impacts the future schooling of children.

The lack of quality early learning contributes to an array of disturbing outcomes for young children. Investments in early childhood education improvements are an important necessity to the betterment of our society (Herzenberg, Price, & Bradley, 2005; Landry, 2005; Perry, Henderson, & Meier, 2012). These early childhood education and development investments have positive impact potential on long-term, substantial economic gains for our society. However, today's fragmented early childhood education results in inadequate learning and development for young children, especially among the nation's most vulnerable families and communities (Allen & Kelly, 2015). In terms of behavior, children from low quality programs are more likely to display problematic behaviors (Hyson & Tomlinson, 2014). These challenging behaviors can include such outcomes as physical aggression, lack of following directions, and verbal arguing. In terms of academic behavior, children produce lower school-readiness scores and lower cognitive and linguistic abilities (Hyson & Tomlinson, 2014). Obviously, the risks of low-quality early learning programming are too great for the young children their services are meant to protect.

We need to understand why the early learning system is failing and how to improve it. One explanation is the loss of hands-on, child-centered environments where play is held in high regard. In the past two decades, early learning classrooms have "rapidly become more academically oriented and less focused on exploration, social skill development, and play," (Bassok, Latham, & Rorem, 2014, p. 2). These missing components of developmentally appropriate practice impact long-term outcomes for young children. In contrast, effective early childhood practice develops social skills, self-regulatory skills, physical health, and mental health of young child, (Bassok, Latham, & Rorem, 2014). Again, highlighting the key to quality early childhood experiences for all young children.

Early childhood education teachers who support a love of learning in young children and use developmentally appropriate practice to build a solid foundation for children's future success should be our ultimate goal as educators. Therefore, it is imperative to start narrowing the knowledge to practice gap in the early childhood education field. Pfeffer and Sutton (2013) define this gap as the knowledge of what needs to be done frequently failing to result in action or behavior consistent with that knowledge. Turning knowledge into action is an approach to this problem, but the knowledge to practice gap is not an easy fix. According to the ACT Research and Policy Report (2013), a primary obstacle to strengthening early learning programs is the limitations in the training and support for educators in early childhood. Early childhood education programs at the community college level contribute heavily to the training and support of future early childhood teachers. Herzenberg, Price, and Bradley (2005) in an Economic Policy Institute report, found that 40% of early childhood center teachers and administrators hold an Associate's degree from community college settings. Therefore, community colleges are a critical place to engage in instructional improvements in ECD courses to close the knowledge to

practice gap and improving the experiences young children will one day have with these teachers.

This instructional improvement project assumes that ECD students' awareness of their own metacognition is essential to preparing community college students to work as teachers and childcare providers in the early learning field. In general, research demonstrates deficits community college students have in metacognitive awareness in support of their learning, and argues for the need to develop students' ability to use metacognitive awareness to become analytical of what they read, hear, or see based upon an understanding of frameworks that shape the information they encounter (e.g., Thomas, 2002). For ECD students who will become teachers in early childhood classrooms, the need is even more profound because in order for community college students in the ECD program to think about how they teach, they need to think about how they think and learn.

The metacognitive awareness of community college students in the ECD program is critical to their use of authentic teaching practices in the field. Yet, this skill requires deliberate training to develop and improve, and development of this skill is crucial for improving the quality of early learning. Additionally, increased levels of metacognitive awareness "would lead to better academic performance" and deeper learning (O'Neil & Abedi, 1996, p. 20). When students become more aware of their metacognition, they become more knowledgeable in general (Pintrich, 2002). This means that when early childhood educators become aware of their own metacognitive ability, they are able to learn effective pedagogical practice deeply and develop skills to be intentional in their practice, thus helping to narrow the theory-practice gap in the early childhood field.

Social Justice Implications

The care and education young children receive have profound social justice implications. This section addresses four important social justice components relevant to this study. One aspect to consider is the importance of high-quality early learning for all children. The second is the need for quality early learning environments through which all young children will have the most effective learning opportunities. The third is gaining an insight and understanding to the common characteristics of the under-prepared community college student. The final aspect to consider is the intersection the early childhood education and the community college student in the early learning field.

Importance of Overall Quality

The social justice implications in this investigation come from the importance of quality in the early childhood field. This first piece is the need for quality early learning for all young children. Statistically, there are almost 15 million children under the age of 6 in the United States who have working parents (Department of Education, 2016), and there are 11 million children under the age of 6 living under the poverty line (Addy & Wight, 2012). This is no small population of young children to serve and it is our duty to be sure they all have quality programming to attend that will meet their diverse needs. However young children from low-income families often have least access to high-quality programming. (BUILD Initiative , 2017; Gorski, 2015; Hyson & Tomlinson, 2014; Parham, 2016; Williams & Crockett, 2013). Through this socially just pursuit, the quality of early learning for young children and their families, especially those living in poverty, needs addressed. Improving the quality of early learning that meets the diverse needs of all children in early learning starts with the programs employing community college students from ECD programs.

The Department of Education (2016) indicates that high quality educators are the single most important factor in early learning experiences. After a seven-year study of preschool programming, Early et all (2007) indicated the need for research that focuses on how to produce high-quality services for all young children through preservice preparation of teachers. From this social justice lens, we need a population of ECD students from the community college level who are able to apply their learning to a diverse population of young children. Quality educators must be informed and intentional in their pedagogical practices (Hyson & Tomlinson, 2014) It is also important for quality that early childhood educators to be able to individualize early learning experiences for the young children and families they work with (Biddle, 2012; Hyson & Tomlinson, 2014). Through a use of developmentally appropriate teaching practices to support quality programming once they graduate from ECD programs at the community college, the necessity to meet the need for quality early learning environments can be a focus for success for all young children and their families.

Need for Quality Early Learning Environments

The question to pose is not if early learning matters but rather, why quality early education is not accessible to all children and how we can better support the use of developmentally appropriate practice from ECD students when they enter the early childhood profession. High quality early education has been shown repeatedly through scientific research to establish a solid foundation from which to build healthy development and learning for children (Ackerman, 2005; Barnett & Ackerman, 2006; Epstein, 2006; Herzenberg, Price, & Bradley, 2005; Illig, 1998; Kremenitzer & Miller, 2008; Landry, 2005; Petersen, 2012). Yet Masten & Coatsworth (1998)argue that, “over the past 25 years signs of trouble emerged for child development in the United States, spurring considerable attention to the status of children in

terms of school success, behavior, and physical and mental health, and growing interest in the origins of competence in development" (p. 205). This attention has resulted in a body of research that demonstrates that, "The early development of motor skills, language, self-confidence, play, and problem-solving abilities are relevant for understanding competence in the school years," (Masten & Coatsworth, 1998, p. 207). Short-term benefits of high-quality early childhood education include gains in IQ scores, better social behavior, higher language skills, and better reading and math scores on achievement tests (Ackerman, 2005). Long-term benefits include higher scores on academic achievement test, greater school graduation rates, less grade retention, and less placement in special education (Ackerman, 2005). Providing high-quality care to a diverse population of children is not a small task, but the healthy development of young children is the responsibility of the school, the academy, and the community to help ensure success later in life.

Our challenge as a nation is that we must enhance the value of our investments in all young children to secure a promising economic, social, and political future for our country (Shonkoff, 2004). Early childhood education policy needs to be a part of a well-functioning system. This is a daunting task since the inequities affecting early childhood take on a variety of forms from unequal time and attention of decision-makers, lack of funding issues, differences of cultural norms, values, beliefs, and goals, and the inequitable distribution of developmentally appropriate practices. Child care, although a necessity for most families "is a fragmented non-system that is difficult to access and of variable quality" (Finn-Stevenson, Stern, & Zigler, 1997, p. 396). Perhaps it is even more important to recognize that quality child care is beyond the means of many families, especially from middle- and low-income (Butler, Beach, & Winfree, 2008; Hofferth & Wissoker, 1992; Shonkoff, 2004). When we look at quality early learning, we

must look at it from a diverse perspective of all young children, not a fragmented system that is inaccessible to families and their children.

Accountability from the higher education setting to raise the quality of early learning environments for the diverse needs of all young children needs to be strengthened. One of the most important avenues to pursue in improving the quality of care and education provided to young children is investing in the adults who work with them (Allen & Kelly, 2015). "Well-educated teachers play a crucial role in providing the type of high-quality early care and education that not only benefits young children and their parents but society as a whole, too," (Ackerman, 2004, p. 329). Yet, a majority of early childhood teachers are not "well educated". In early learning, 42% of the workforce is comprised of individuals with an education level of "high school or less" and 39% have "some college", which includes those with an Associate's degree (Herzenberg, Price, Bradley, 2005). This means over 80% of the early learning workforce hold qualifications below what is deemed acceptable. These individuals will be faced with the potential need to enroll in college as they are faced with rising educational requirements for employment (Herzenberg, Price, Bradley, 2005).

Therefore, at the community college level, instructional efforts to meet the demands of this challenge must be examined. As the push for degrees for all those employed as early learning teachers, not just lead teachers continues to be a battle for quality services to young children, instructors at the community college level must prepare for this change through focused and improved instructional practices.

Under-preparedness of Community College Students

To begin, it is necessary to understand the basic structure and population of the community college. This is a large and complex populace. In the United States, 13 million

students each year are educated at community colleges (Wyner, 2014). The advantage community colleges offer is in respect to location and affordability. However, in comparison to four-year universities where the age and readiness of the population is highly homogenous community colleges seek to educate a wider range of students (Elmogahzy, 2014). Traditionally, four-year institutions enroll young adults; age 18 – 23, who have been successful in secondary education. The population of a four-year institution tends to be largely white and is more often affluent than poor. Historically, more men than women were enrolled in four-year institutions. However, about 60% of community college students are female, at least 40% are from diverse ethnic and racial backgrounds, over 60% are enrolled part time, over 60% depend on financial support, as they are less affluent than their four-year counterparts, and more than 50% are the first of their family to attend college (Elmogahzy, 2014). Community colleges face fast changing student populations with differing purposes, whether it is workforce readiness or transfer to a four-year institution (Wyner, 2014). According to national statistics, 20% of four-year college freshmen require remedial coursework (National Center for Educational Statistics, 2013). At the community college level an estimated 50% of high school graduates entering do not meet the placement exam standards to enroll in college credit coursework (Thomas, 2002). Therefore, community colleges are required to meet the needs of a diverse student population while supporting student who have additional characteristics that might compromise their ability to succeed in college. Baily, Jenkins, and Leinbach (2005) report that in general community college students:

- Have lower test scores in high school
- Are far more likely to delay enrollment in college directly after high school
- Attend part time

- Interrupt their college studies, and
- Are much more likely to come from lower socioeconomic status households.

This span of compromised academic readiness does not prohibit a student from admission to a community college. An open admissions policy is one where secondary school graduates or individuals with a GED equivalency are admitted without regard to academic record, test scores, or other higher education qualifications (Common Data Set, 2014-2015). If at least half of the community college population consists of students who are not college-ready, the issue is one that deserves attention.

One way to address such a concern with academic success is in developmental coursework, which is a necessary pathway for these students (Calcagno, Crosta, Bailey, & Jenkins, 2007). This remedial service is in the form of instructional courses that are designed for deficits in general competencies necessary for a regular post-secondary curriculum and educational setting (Common Data Set, 2014-2015). This community college intervention is in place to help meet math and reading competencies.

However, students do not need to take or successfully complete developmental coursework in order to register for the coursework within their major, which means that students in the early childhood education program may not be academically ready to be successful. This is a challenge, and so our instructional practices must support students who may not be considered “college ready” by traditional metrics. Aiding a student’s metacognitive awareness through scaffolding goal setting and reflective practices is a potential avenue to pursue such success.

Intersection of Early Childhood Education and Community College in the Field

The fact that so many early childhood providers enter the profession from the community college level is important. According to the Economic Policy Institute (2005), the largest percentage of early childhood teachers comes from the "some college" category that includes an Associate's degree. The National Association for the Education of Young Children (NAEYC) states that, "effective early childhood professionals must have excellent preparation". NAEYC does not make a formal statement about whether this professional preparation should be from a 2-year or 4-year institution but that all early childhood teachers must understand children's development and know how to effectively meet those needs.

In order to effectively meet the diverse needs of young children, one needs to obtain a specialized body of knowledge in the field of early education and child development. NAEYC (2009) provides core standards for preparation programs and pre-professionals across associate, baccalaureate, and graduate degree levels. The higher education experience is a learning opportunity that shows devotion to advancing an educational career in early learning. This learning should be driven by a student's commitment to produce positive effects on the short-term and long-term outcomes of the children. In essence, the start of becoming an intentional teacher, who is focused on providing developmentally appropriate practice. This is consistent with a shift in the early learning field toward a greater emphasis on intentional teaching and the role early childhood professionals play in supporting children's development (Warner-Richter, Lowe, Tout, Epstein, & Li, 2016).

However, the term, developmentally appropriate practice requires some explanation. In the key message of the position statement from the National Association of the Education of

Young Children (2011), best practices are identified as being based on knowledge, not assumptions, of how children optimally learn and develop. According to NAEYC (2009):

> "Developmentally Appropriate Practice requires both meeting children where they are, which means teachers must get to know them well, and enable them to reach goals that are both challenging and achievable," and
>
> "All teaching practices should be appropriate to children's age and developmental status, attuned to them as unique individuals, and responsive to the social and cultural contexts in which they live," (p. xii).

So in terms of equity, community college students in early childhood education programs need to be supported with skills for learning so that they might acquire deep content knowledge through coursework as well as learn how to take that knowledge and put it into action within the early childhood environment. In helping community college students to learn about and use developmentally appropriate practice, ECD educators also have potential to advance equity in early childhood classrooms, especially within schools and child care facilities that rely on personnel who have "some college" or less training in the profession.

The path through which ECD programs seek to deepen content learning and advance practice is within the higher education learning environment as well as in a professional early childhood setting through practicum and student teaching experiences. Community college students learn essential concepts in their course work and then use given opportunities in a supervised field setting for real-world application. These field opportunities give students a chance to take advantage of applying theory and research into practical application. The benefits to the learning experiences community college students have in taking new knowledge and applying it to real-world scenarios allows them practice for practical application.

With a large population of students matriculating through community college to gain this knowledge for practice, ECD students must have guidance to build a solid educational foundation for themselves in order to evolve as effective practitioners and provide effective education to young children. By improving ECD students' metacognitive awareness and ability to goal set and reflect on their own learning progress at the community college level, we are working together to create an early learning system with teachers who are intentional in their teaching to be developmentally appropriate in the early learning community. Further, we are preparing ECD students to use a heightened awareness of their metacognitive abilities and collaborate with peers and community college professors who support their intentional practices with young children in a quality network of school, academy, and community that is conducive to learning and developing for all stakeholders.

Context Review

Action Plan Review

As depicted in Figure 1, this improvement study examined changes in the metacognitive awareness for teaching of community college students enrolled in an ECD program. Teachers who are metacognitively aware have been shown to be more intentional in their use of developmentally appropriate practice. In order to improve the ECD students' metacognition, the instructor scaffolded goal setting and intentional reflection on both learning and teaching outcomes. This improvement was evaluated in the context of authentic teaching experiences in early childhood classrooms that are a part of the practicum course.

This study started with community college instruction at the ECD program's course level as a bottom-up approach to improvement. It focused on the ECD students' ability to set learning goals based off of course learning outcomes, and then reflectively evaluate their progress toward

meeting those goals and in transferring their learning into their teaching experience. Throughout this process, the journaled about the scaffolding techniques used as well as use journaling as an aid to intentional reflection in teaching. The students' changing levels of metacognitive awareness of teaching were monitored at three points in the semester. The course instructor also observed students teaching in an early childhood setting with young children. With an increased ability to set goals and intentionally reflect on their thoughts and actions, it was hoped that the ECD students' pedagogical practices would be developmentally appropriate for the young children they were teaching.

Community College

As a whole institution, the Community College of Allegheny County (CCAC) serves over 48,000 students in some capacity, with the majority attending part time. The population of the college is predominately women. Seventy-five percent of our college population indicated that CCAC was their first college choice, with a perk being that course sizes at the college average around 18 students per class. However, it is also relevant to note that over 40% of CCAC's population must enroll in developmental coursework. The success rate of our CCAC students, although it aligns with national statistic trends, could be considered bleak. In the lowest developmental math course, there is a 14% success rate and there is 30% success rate in the lowest reading and writing developmental courses.

The statistic that is not available is the percentage of students from this category that are in our ECD specific programs. I hold the professional belief that labels have pros and cons. The cons of labels are when educators use it to lower expectations, enable students, and prohibit their growth in learning. On the other side, labels can be beneficial in responsibly responding to the individual needs of a specific learner. Without pertinent information, instructors may lack

specific data to meet the needs of the students with varying abilities and goals efficiently and effectively.

Furthermore, with a large percentage of students coming to a community college not college ready, it is critical to learn more about the students seeking degrees in the early education and child development field. It is necessary to obtain information about what how our community college students think about their learning and how their goals align with those of the early education and child development program because such information will aid our instructional efforts to educate our students in a manner that allows them to gain content knowledge as well as to gain pedagogical skills for their work in the early childhood education field. In addition, by supporting the development of thoughtful goal setting and reflective practices within their coursework, we offer them a tangible means of confidently improving their practice once they move into the real world.

ECD Program

I approach this research as a full-time community college professor in the ECD program. Our ECD program offers six different options ranging from diplomas to certificates to an associate's degree. These options all provide direct education and training in professionals working with children ranging from infancy to fourth grade. This early childhood age grouping is in accordance with the National Association for the Education of Young Children (NAEYC). Through the Community College of Allegheny County's website, the specific degree requirements for the Child Care Diploma, the Child Development Diploma, the Children with Special Needs Diploma, the Early Education and Child Development Certificate, the Early Childhood Director Core Certificate, and the Early Education and Child Development Associate of Science degree are listed in an online catalog (Appendix A).

The ECD program serves a dual purpose through the options of career training and/or transfer to 4-year institutions. We do have a program-to-program statewide articulation with state colleges and universities that transfers our students into 4-year institutions as juniors to earn a bachelor's degree in early childhood education with Pre-K-4 teacher certification. Individual articulations with other higher education institutions are also in place. These options provide a foundation for an entry-level position as childcare practitioners, early childhood education lead teachers and aides, a director of a childcare center, or potential transfer to a four-year institution for teacher certification.

This ECD program was the first in Western Pennsylvania accredited by the National Association for the Education of Young Children (NAEYC). Through our self-study and following the parameters set forth by the community college, the ECD program offers choices for entry-level employment simultaneously providing a foundation for long-range educational and professional goals.

Currently of 199 recent early education and child development graduates, all but one student reported that they were employed in Allegheny County. Our population of students is local and they stay local. This is important because our ECD program is situated "in our own backyard" (English, 2015), and the focus of improvement has real implications for both community college students and their future early childhood students.

Through classes and practicum experiences, students are expected to learn about the developmental needs of children, the activities and environments that promote optimal growth and development, professionalism, family relationships, community engagement, and resources, laws, and regulations governing the welfare of children and their families. Thus, at a glance, the

ECD program is an all-encompassing program to reach the population the community college serves in terms of career-oriented and transfer students in the county's population.

CHAPTER II: PROBLEM OF PRACTICE

In service of young children to improve access to quality early learning, early education and child development preparation at the community college level needs to be improved. This is a complicated task and a large overarching problem in the early learning field. This study starts by exploring a small-scale intervention in the teaching of ECD coursework, allowing me to leverage my context as an instructor in an ECD program. Consistent with the goals of better understanding our ECD student population and in improving instruction to support the development of metacognitive awareness, goal setting, and reflective practice, this study addresses the following research questions:

1. What kinds of goals do community college students in an early education and child development course set at the start of the semester?
2. Does the quality of community college students' goal setting improve with scaffolding?
3. Does the quality of community college students' intentional reflection on learning and practice improve with scaffolding?
4. Does the community college students' metacognitive awareness change given experiences with scaffolding two theoretical components of metacognition (goal setting and intentional reflection) and with practical experience in an early childhood classroom?
5. Do community college students' self-evaluate their developmentally appropriate teaching practices similarly to the instructor?

Literature Review

This literature review presents information about the improvement inquiry focus and the three major areas targeted for improvement, (metacognitive awareness, goal setting, and reflective practice). The literature review begins with an overview of the Model for Improvement, (Figure 2) as the framework for improvement. Then, in relation to the conceptual framework (Figure 1), the literature review provides information about metacognitive awareness in relation to the goal setting and reflective practices of ECD students at the community college. The specific theoretical framework presented for the intervention is rooted in scaffolding instruction. Through scaffolding goal setting and reflection becomes an intentional practice in order to improve the metacognitive awareness of ECD students and thus improves the pedagogical practices in the early learning field.

Improvement Inquiry for Change in ECD

Critical to the early childhood field, we need qualified early childhood educators coming out of community college programs who are intentional in applying a developmentally appropriate approach to early childhood education. In order to do so, the early learning field needs qualified early childhood education teachers to use child development facts and pedagogical knowledge they have learned in their classrooms. The advantage to this theoretical and pragmatic approach is opportunity to effectively improve early childhood education as a whole. Therefore, this improvement inquiry study is grounded in empowering community college students to become intentional teachers in early education and child development through developing metacognitive awareness through goal setting and reflection.

This study uses an improvement inquiry framework to look at effective improvements that will bring about purposeful change to benefit a system and the people within that system. It

is not an easy task to tackle this obstacle. The Model for Improvement (Figure 2) provides a framework for effective improvements that will bring about purposeful change through the Plan-Do-Study-Act Cycle (Langley, Moen, Nolan, Nolan, Norman, & Provost, 2009).

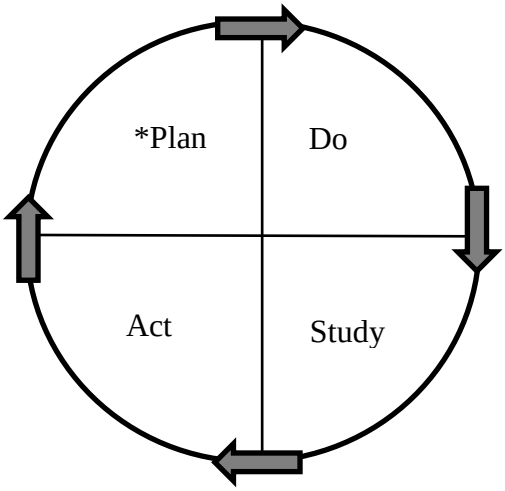


Figure 2. Model for Improvement

When taking a formal improvement route, the Plan-Do-Study-Act Cycle tests an implementation to systematically study if efforts are resulting in change toward the intended goal. First, the investigator must plan a specific test. Next, the plan is executed, and afterward the learning that occurred must be summarized. Last, action is taken based on this learning. This is an efficient trial-and-learning method to implementing and documenting a change agent (Langley, et al, 2009). The focus of improvement inquiry gives structure to thinking about a problem, and systematically approaching for an effective means of change.

Gawande (2009) shares a captivating lesson about the success airlines have had with checklists in emergencies. It was a brief six-step checklist to use when trying to restart a failed engine. One of the steps simply read, “Fly the airplane.” This is overtly done to remind pilots in an emergency to do the most basic task necessary for survival. I see this as poignant to early

learning. We must address areas of concern, systematically and thoroughly toward effective improvement, but we must also remind ourselves to, "Fly the airplane." Our job is to provide high-quality learning, and to do so using effective practices. Therefore, when we make changes to improve early learning, we must remember to continue to implement developmentally-appropriate, effective practices while doing so.

With this in mind, this study's improvement cycle starts with instruction at the course level as a bottom-up approach to improvement. It will focus on improved metacognitive awareness and attention to scaffolding community college students' ability to set goals and reflect on their own learning and practice in an early education and child development course (Figure 1). This investigation will evaluate how this one cycle of the Model for Improvement (Figure 2) affects the community college student's metacognitive awareness, goal-setting, reflection and authentic teaching in an early childhood course where scaffolding in present.

Metacognitive Awareness of ECD Students

Metacognition and learning. Metacognition has been studied over the last 40 years, and as such is a dense field of research that can be difficult to navigate (Schraw, 1998). Many different definitions and indicators of metacognition have been proposed across the research history and across the ages of participants in the research. As the investigation into metacognitive awareness literature began, the research of Balcikanki (2011) and the work on measuring metacognitive awareness for teachers drew upon the work of Schraw and colleagues throughout the years prior. Therefore, this study draws upon Schraw's work to begin to create a working definition of metacognition appropriate for adult learners (community college students) who will become early childhood educators.

At its most basic, the term metacognition literally means thinking about thinking (Pellegrino & Hilton, 2013). In general, metacognition can be defined as the awareness of one's own learning process to better manage one's cognitive skills. Schraw and Dennison (1994) provide greater clarity by defining metacognition as "the ability to reflect upon, understand, and control one's learning," (p. 460). This definition is especially important to understand in education when thinking about metacognition because it gives ownership of the learning to the student. When a student holds ownership, they have the ability to make meaningful decisions based upon that learning. However, the student must be aware of this control in order to use it, and so the importance of metacognitive awareness emerges.

Schraw (1998) divided metacognition into two components. The first component of metacognition is the knowledge of cognition. "Knowledge of cognition refers to what individuals know about their own cognition or about cognition in general," (Schraw, 1998, p. 114). Knowledge of cognition would encompass abilities of attention, evaluation, reasoning, and decision making in terms of content to be learned. Schraw & Dennison (1994) referred to knowledge of cognition in their empirical data as "one's strengths and weaknesses, knowledge about strategies, and why and when to use those strategies," (p. 471). This is valuable when linking metacognitive abilities to academic goal setting and reflective practices.

The second component of metacognition is the regulation of cognition. "Regulation of cognition refers to a set of activities that help students control their learning," (Schraw, 1998, p. 114). Regulation of cognition is a controlled use of attention resources, existing strategies, and greater awareness in one's learning. Schraw & Dennison (1994) identified the three essential skills that measure regulation of cognition: planning, implementing, monitoring, and evaluating one's strategy use.

The link between metacognitive awareness and the goal setting and reflective practices of students is important in the teaching and learning paradigm (Figure 1), but the ways in which these components complement each other is made clear by Schraw and Dennison (1994). An individual uses what they know about cognition generally and their own strengths and weaknesses specifically to learn new content. By employing cognitive regulation, they are able to prioritize aspects of learning and be strategic about the process of learning. Again, the control of learning is in the hands and mind, of the learner. Construction of their own meaning is important because the learner must be aware of what they are attempting to understand and how can they best learn it for application.

When these ideas are applied to ECD students in a community college program, they suggest that the knowledge of cognition encompasses general information about learning, specific information about one's own learning, and ideas about how children learn. Similarly, regulation of cognition influences choices the ECD students make about their own learning as well as choice they make in organizing classrooms and lessons for children's learning.

Other theorists have continued to refine this definition of metacognition by focusing on one component or the other. For example, Pintrich (2002) defines metacognitive knowledge as "knowledge about cognition in general, as well as awareness of knowledge about one's own cognition," (p. 119). This definition highlights the relevance of one's awareness in terms of the metacognition. This is key in understanding the role the learner has in their own success. In other words, a student must be aware of their own metacognition in order to use it. Likewise, Imel (2002) continues to build on this idea of metacognitive awareness when she "refers to the ability of learners to be aware of and monitor their learning process," (p. 1). This highlights the importance of a learner actively tracking progress in learning, a factor that is relevant to student

learning, both at the community college level and in the early childhood program. Further, this is important because the learner needs to monitor their own performance and potential performance to find evidence of success or make necessary adjustments as deemed necessary. Thus, Imel (2002) adds ongoing monitoring to metacognitive awareness, which provides the basis for inclusion of the goal setting and reflection cycle in developing metacognitive awareness.

Coutinho (2006) and Martinez (2006) explored the connection between metacognitive awareness and cognitive learning strategies to distinguish between the roles of metacognition and cognition in building on student performance. In particular, the results of Coutinho's research (2006) supported the use of cognitive training programs including awareness of learning styles and goal setting to help poorly performing students become more academically successful. Based on similar work, Martinez (2006) proposed a more precise definition of monitoring and controlling ones' thoughts (p. 696). This type of empirical work shifted the focus of metacognition from awareness to control, however, measuring metacognition as it links to academic performance remains difficult, and its correlation to predicting levels of learning continues to be debated and studied.

Therefore, although a vast entity to define and measure, the simple definition of "thinking about your thinking" can be built upon to compile a working definition of quality metacognitive awareness used here that reflects both an emphasis on awareness and knowledge about one's own and others' cognition and monitoring of cognition. Young and Fry (2008), break down this type of metacognitive awareness into three distinct activities. These components of metacognition are:

1. Planning: goal setting for specific tasks being cognizant of appropriate strategies and resources that are necessary.
2. Monitoring: purposeful awareness of performance in meeting planned goals.
3. Evaluating: reflection on outcomes to determine if targeted outcomes were reached with goals that were set.

Quality metacognitive awareness is the higher order skill that encompasses the three critical pieces above. Consistent with these critical components of metacognitive awareness, this research will examine goal setting as a means of planning and reflection as a means of monitoring and evaluating as shown in Figure 1. The study will investigate the types of goals students set for specific course objectives, as well as investigate their ability to apply goal setting and reflection to their own learning and teaching practices.

With the focus of student's building upon their own learning, Balcikanli (2011) indicates there are two aspects, knowledge and regulation, are key components to a student's metacognitive awareness and are key elements in developing a student's autonomy in the learning process. Therefore, metacognitive awareness has the potential for positive influence on learning for all students in this sense. Knowing how one learns in life is necessary skill for all future learning opportunities (Gregory & Chapman, 2012). It is important to explore how this independence as a learner lays a foundation for academic successes, and more specifically, how developing this foundation can serve as an advantage to those at the community college level.

Implications of metacognitive awareness for community college students. In theory, metacognitive awareness is a skill useful in the academic environment and professional contexts. When an instructor emphasizes metacognition, optimal learning occurs (Garner, 1990; Hartman, 2001; Özsoy & Günindi, 2011; Young & Fry, 2008). However, even though there is limited

research available specifically to community college students and metacognition, the case for community college instructors supporting the development of metacognition is especially strong if we compare it to the research that has been conducted with four-year institutions. Hartman (2001) researched undergraduate students at a four-year institution preparing to become teacher and found that students who develop and utilize high-quality metacognitive awareness focus on content learning and academic experiences that are active, meaningful, retained over time, and transfers to a variety of contexts. This empirical support for developing metacognitive awareness may be applicable to community college students as well.

Thus, a metacognitive focus can bring about quality improvement in learning outcomes for community college students through the students' own intentional thought and then action in aid of learning. Martinez (2006) argues that metacognitive abilities are "central to conceptions of what it means to be educated" in an ever-changing world full of complex information, and demands "fresh thinking" (p. 699). This independent thinking allows community college students to be in charge of the strategies they use to plan, monitor, and evaluate their learning in my courses. Metacognitive awareness is associated with more advanced thinking and is central to gaining control over one's learning behaviors (Bjorklund, 2007). In fact, metacognitive awareness can support persistence focus, overcoming obstacles, and ultimately creative solutions to success (Martinez, 2006). This quality improvement is beneficial to community college students in their success at learning and applying their coursework.

Additionally, metacognitive awareness has a powerful impact on their future use of knowledge and skills being taught. Halpern (1999) demonstrated that explicitly taught "thinking skills" help college students learn to improve on the ways in which they transfer knowledge from successful instruction. Further, metacognitive strategies distinguish stronger students from less

competent learners (Pellegrino & Hilton, 2013). In fact, using the Metacognitive Awareness Inventory (MAI) with college students, Young and Fry (2008) were able to provide empirical evidence demonstrating a significant correlation between metacognitive awareness of students, their overall cognitive processes, and their final course grades and overall GPA.

Across these studies with college populations, the findings are clear that appropriate recognition and application of these metacognitive skills are associated with students becoming better thinkers and link learning to future work (Halpern, 1999; Kenner & Weinerman, 2011; Pellegrino & Hilton, 2013; Young & Fry, 2008). Improved metacognitive awareness is also empirically associated with academic success through targeted teaching of metacognitive skills to undergraduates (McCabe, 2011). Therefore, in order to cultivate learners who are independent thinkers, in control of their own learning process, and willing and able to apply learning in their professional context, instructors must cultivate learners who are metacognitively aware (Balcikanli, 2011; Özsoy & Günindi, 2011; Young & Fry, 2008).

Metacognitive awareness and teaching. Metacognitive awareness is a cornerstone of intentional teaching that needs to be fostered and supported in the teaching profession. Further, metacognitive awareness is an aptitude essential for those entering the teaching field. In order to scaffold learning and achievement, teachers must support students in the development of metacognitive awareness, as it will help student to self-reflect and develop as life-long learners (Gregory & Chapman, 2012). Therefore, metacognitive awareness is especially necessary learning for those students studying to be teaching professionals (Baylor, 2002).

A number of studies have demonstrated that reflective teachers use metacognitive awareness to monitor their pedagogical decision-making and actions within the real-world context (Halpern, 1999; Hartman, 2001; Memnun & Akkaya, 2009; Pellegrino & Hilton, 2013).

For example, Happo & Määttä (2011) provide empirical data to support that pedagogical expertise of early childhood teachers is connected to metacognitive knowledge. This includes knowledge of when, where, and how to use specific strategies in teaching.

Additional studies demonstrate that education students can learn to develop these metacognitive skills through instruction as part of their teacher education programs. For example, the empirical research of Özsoy & Günindi, (2011) presented evidence that the metacognitive awareness of prospective teachers increased as they progressed through college. Research by Memnun & Akkaya, (2009) found teacher trainees needed to be explicitly educated about metacognitive awareness in order to develop their own metacognitive awareness before they could use it effectively in their experiences as a teacher. Their research found that developing metacognitive awareness was linked to increasing success both in their own learning and then in their teaching practices throughout their lifetime (Memnun & Akkaya, 2009, p. 1920). Ball (2009) found that metacognitive teachers have the ability to identify strategies they use to attain their goals and to modify their teaching and learning strategies based on awareness of their effectiveness in the classroom (Ball, 2009, p. 51). Therefore, through explicit instruction, metacognitive awareness can become a central component to education and the workplace in terms of developing future teachers' reflective judgement, critical thinking, decision making ,and problem solving (Dawson, 2008).

Measuring metacognitive awareness of teachers. The role and use of metacognition skills is critical to understanding how teachers and students function and adapt to instruction (Azevedo, 2009). So, with no tools readily available that looked to measure and monitor the metacognition of teachers, the Metacognitive Awareness Inventory for Teachers (MAIT) was established to do so. Balcikanli (2011) believed that "knowing what teachers know about their

own teaching should be a starting point for a change in teacher development". MAIT began with adaptations being made to the original questionnaire, the Metacognitive Awareness Inventory (MAI), developed by Schraw and Dennison (1994). The MAI was a 52-question survey that looked at the knowledge one possesses and the regulation of that knowledge by an individual. To measure the metacognitive function of educators, the MAI was adapted to address items that focus on teaching directly, and aimed to bring a realization to teachers about their own metacognitive function toward teaching practices (Balcikanli, 2011). Thus, the 24-question MAIT was created (Appendix C). Results from a three-phase research study by Balcikanli (2011),using the MAIT demonstrates that there is good reliability and evidence for validity when used as a diagnostic and educational research tool to measure metacognitive awareness of teachers based upon scores from the inventory. Thus the use of the MAIT with community college students in a capstone course of their early childhood program in which they are working to become teachers is consistent with the survey design and research on metacognitive awareness in teaching.

Implications of metacognitive awareness for ECD students. Although it has been shown that metacognitive awareness is influential for improving college students' achievement and application of content learning to professional contexts as well as for developing teachers' use of reflective and developmentally appropriate practice, we must also address the specific implications of metacognitive awareness has for ECD students at the community college level. ECD students need metacognitive awareness of their teaching because of the complexity of the profession. For those pursuing a career as an early childhood education teacher, metacognitive awareness of teaching is a skill that enhances their ability to be critical and analyze their instructional practices from multiple perspectives (Baylor, 2002). These perspectives are aligned

with best practice, and include the active learning of their students, the beliefs of the families they work with, their collaboration with colleagues, and the implications the own thoughts and actions have on all of the above.

Essentially, the complexity of this task, especially for early childhood teachers, requires the development of metacognitive awareness as an "intentional" teacher. Intentional teachers have a two-fold mission. One aspect of intentional teaching is to make certain that young children gain the knowledge and skills necessary to be successful as lifelong learners (Epstein, 2014). The goal of an intentional teacher is to ensure that young children continue to grow as individuals when faced with a learning challenge now and in the future. To ensure this aspect is met, an intentional teacher must then make a conscience effort to embrace all aspects of a child's learning and development (Epstein, 2014). These domains include but are not limited to social, emotional, cognitive, physical, linguistic, cultural, and creative. When future early childhood teachers develop their metacognitive awareness, they become better at "active learning, critical thinking, reflective judgment, problem solving, and decision-making" (Dawson, 2008). These characteristics of metacognitive awareness then allow teachers to invest in quality education by setting high performance standards for themselves and the young children they work with.

Goal Setting

Goal setting and learning. Goal setting is the planning and monitoring component of metacognitive awareness, and is a fundamental component of motivation and learning (Schunk, 2003). Therefore, goal setting is a key component to this study, and needs a formal definition derived from research literature.

According to Schunk (1990) and Aguirre & Speer (2000), goal setting is a cognitive construct that describes, at various levels of detail, what one wants to accomplish. This describes

goal setting in terms of one making a conscious decision about what they want to accomplish. Similarly, Eccles & Wigfield (2002), state that goal setting is accomplishing a task or an activity through direct, regulated behavior. Both of these definitions provide the general concept that goal setting focuses on the planning element that gives students a sense of direction and focus to their learning.

In general, goals can be defined as a desirable aim in one's learning or a desirable product of one's activity (Hadwin & Oshige, 2011). Goal setting provides a distinct focus for learning, because a student has set expectations to work toward in their learning. Goals are a motivator to one's learning, and can improve one's overall performance on a specific standard set through goals (Schunk, 1990; Schunk 2003). However, these goals need to be challenging yet attainable in order to be effective (McShane & Von Glinow, 2005; Schunk, 1990). Yet, when done in this manner, goal setting is a contributor to the learning process. Zimmerman (2002) reported that there is an increase in academic success by learners who set goal for themselves (p. 68). This is valuable strategies in the learning process.

Goal setting works to support learning, because "individuals who set goals are more likely to perform at higher levels than individuals that do not set goals," (Friedman & Mandel, 2009, p. 230). It is the thoughtful planning that begins at the start of a learning opportunity. Goal setting helps students to organize and manage their own learning time (Bell, 2010). When students set motivating goals and achieve academic success, they are invested in their own learning.

Essentially, goal setting informs the level of performance within a desirable level of learning (Hattie, 2009). By goal setting, the learner is activating relevant aspects of their prior knowledge in order to make organizing and comprehending new material easier (Cross, 1999).

Goal setting therefore gives students measurable direction for which to focus their efforts within learning opportunities.

Metacognitive awareness and goal setting. Metacognitive awareness in terms of goal setting is the conscious and periodic self-checking of whether one's goals are achieved and reflecting on strategies applied to learning (O'Neill & Abedi, 1996). Therefore, goal setting is a powerful component of metacognitive awareness, and the relationship is demonstrated in the literature. For example, as students set goals to understand and master content, they report using more metacognitive strategies (Dawson, 2008). Their thinking is driven by the goals they have set.

The positive connection between goal setting practices and metacognitive awareness affects cognition and resource management strategies (Ley & Young, 1998; Vrugt & Oort, 2008). Through goal setting, community college students become aware of "what they do and do not know about specific content, they develop a greater metacognitive awareness," (Achacoso, 2004). This is how to develop as an expert learner; the results are the best performance and decision-making for a task (Ridley, Schutz, Glanz, &Weinstein, 2004).

Additionally, goal setting helps students gauge the direction of their learning. Goal setting engages the student to take an active role in thinking about how they think in terms of specific content. In an academic environment such as community college, students who apply goal setting to their learning seek to learn as much as they possibly can (Strickland & Strickland, 2015). This process provides clarity on what learning has occurred and where the learning still requires attention.

Goal setting in the context of coursework. The learning outcomes listed in a course syllabus provide an outline to the learner of the collective goals of the group as defined by the

instructor. These learning outcomes are "targets that the students can envision for themselves and achieve (Brookhart, 2011). In addition, when students' individual goal setting is formalized by explicitly writing goals, an instructor gains a clear picture of their students' focus and expectations relative to the instructor's goals for the group. Thus, instruction to meet the learning outcomes can become closely aligned with the intentions of the students (Sugar, 2010). When the course learning objections, student goals, and instruction align, the teaching and learning connection are strengthened. This is because it allows expectations and instruction to align in a manner that is meaningful to the student while meeting the course learning outcomes as well.

However, in order to be successful in reaching or exceeding the collective goals, students must set goals for their individual learning as well. Therefore, students should take the responsibility to plan and monitor their own learning by utilizing goal-directed behavior (Ley & Young, 1998). According to Ley & Young (1998), goal-directed behavior is when a learner manages their own behavior(s) to promote learning and master goals. In this way, goal setting could become a means by which students can develop autonomy over their individual learning even while being part of a larger course structure, since goal setting can help a learner who is scattered in their efforts to approach a learning task in a more systematic and helpful manner (Cross, 1999). Although student goal setting can be flexible (i.e. can and should be adjusted as needed with experiences in the learning environment), formally thinking through goal setting gives students a purpose and a direction to their coursework.

Defining high-quality goal setting. Despite the relative simplicity in the ideas about goal setting, there is a level of complexity in identifying quality goal setting. It is beyond telling students to do their best (McShane & Von Glinow, 2005; Schunk, 1990). Goal setting needs to

be a formal process to align teacher and student expectations. Experts can use goal setting to engage in high-quality forethought to regulate their learning (Zimmerman, 2002). Students need clarity for success and goal setting provides this opportunity.

Students need to set goals that are specific and measurable, and must track them over time to reflect and evaluate on the efficiency of their learning relative to the coursework (Friedman & Mandel, 2009). This is a way to ensure efficiency and measureable success within student goal setting. Further, research has shown that participating in setting challenging, yet achievable goals positively influences one's performance (McShane & Von Glinow, 2005). For example, Zimmerman (2002) found that students who were asked to set specific goals for their learning displayed superior achievement.

However, it is important to note that goals should be seen as moderately difficult by the learner, and be able to convey a clear sense of progress in order to be contribute to the learning process (Schunk, 2003). This is a key component to the goal setting process. Goal setting brings relevance to one's learning by defining a measurable aim for their student through high-quality goal setting, and the result can be student achievement increases and the quality of learning improves.

Implications of goal setting for community college students. At the community college level, students may lack the skills to engage in goal setting independently. For example, Person, Rosenbaum, and Deil-Amen (2006) found that community college students may have significant difficulty in knowing how to accomplish their educational goals, and may be reluctant to ask for help. Therefore, in community college coursework, students need to be explicitly shown what the targeted learning outcomes (collective goals) are and be given structured opportunities to formalize their individual goals in relation to the course goals. They must also

be provided with opportunities to reflect on goals and made to feel comfortable in asking for help when needed. In addition, it is important to model high-quality goal setting through demonstrating the instructor's targeted learning outcomes are measurable and specific objectives published in the course outline/syllabus. The goal setting of the community college student may then focus on the tasks they hope to achieve and the competence they aim to gain in relation to these learning outcomes set for the course.

Goals set in this way provide a means for community college students to organize and measure their own learning. Evidence suggests that when community college students use high-quality goal setting in this manner, they focus their efforts on knowing what they are supposed to learn (Strickland & Strickland, 2015). In addition, community college students who optimize goal setting use their goals as a strategic tool to plan and manage academic time (Ley and Young, 1998).

When we consider the adversity of under-preparedness that an estimated half of the student population at the community college faces, strategies that support learning and focus achievement into measurable tasks become a beneficial use of instructional time.

Angelo (1993) identified fourteen research-based principles for providing effective higher education instruction, and the following relate specifically to goal setting:

1. Learning is more effective and efficient when learners have explicit, reasonable, positive goals, and when their goals fit well with the instructor's goals.
2. Learning requires focused attention, and awareness of the importance of what is to be learned.
3. High expectations encourage high achievement.

These principles apply to the goal setting practices of a community college student, because students with relevant goals are more likely to be motivated to perform and met expectations that are set forth in the goal (Friedman & Mandel, 2010).

Goal setting and teaching. Goal setting is also relevant to successfully teaching in two ways. First, for instruction to be effective, teachers must design learning experiences that align to their own goals for instruction. When teachers "set and commit to challenging goals", there is a direct impact on student achievement (Moss & Brookhart, 2012, p. 23). In a teacher's practice, goals can account for their specific pedagogical actions (Aguirre & Speer, 2000). Goal setting is a beneficial teacher practice because goals make teachers' thoughts apparent to others, including students, and help teachers to examine their own influence in the teaching and learning relationship (Aguirre & Speer, 2000). With this in mind, goal setting in the teaching professional can contribute to improving student achievement.

Secondly, teachers must help students to design goals that are challenging and specific to the instruction (Hattie, 2009, p.25). These challenging yet attainable goals become the basis of the instructional support a teacher gives to aid a student's learning.

By aligning teacher and student goals, goal setting gives direct attention to where efforts should be focused for the teacher and the student, and the effectiveness of teaching increases (Moss & Brookhart, 2012). In fact, effective teachers are defined as those who are metacognitively aware of their own pedagogical strengths and weaknesses and have a "broad repertoire of tools and resources to assist them in attaining their goals" (Ball, 2009, p. 52). Therefore, an effective teacher uses goal setting in conjunction with best practice.

Furthermore, metacognitive awareness works with goal setting to bring success in the teaching and learning partnership. Although teachers need to set challenging and achievable

standards for their students learning, is it not assumed that students will automatically adopt or achieve these learning objectives without knowing what their personal goal are (Zimmerman, Bandura, Matinez-Pons, 1992). Teachers' and students' goals need to be made explicit so they can be revisited throughout learning to ensure ongoing alignment, which in turn builds a teaching-learning partnership. Helping the students' define learning goals is supportive to building this partnership (Papaleontiou-Louca, 2003). Furthermore, when the goal setting process is made explicit in classrooms, it helps students to narrow their focus and justifies their thoughts and actions within the learning process. Students who become active participants in their learning through goal setting know the objective of the learning, can describe their goal for this learning, and know where they are in relation the learning (Hattie, 2009). These are the components of supporting active learners and therefore are a cornerstone to developing as a successful early learning professional.

Implications of goal setting for ECD students. For ECD students, awareness of their goals is meaningful because they contribute to their own learning, and in turn help these students to foster young children's learning through inclusion of goal setting in their teaching. It is important for an early childhood teacher to consult with their students on a regular basis about their goals to ensure that they are on track and developing their ideas and skills fully (Bell, 2010), as well as to develop their own and their students' goal setting ability (Schunk, 2003). As Schunk (2003) argues, "Direct instruction on goal setting may be necessary until students can set realistic goals for themselves," (p. 165). Therefore, ECD students must determine goals and a purpose for their own learning and then the learning of the young children in their classrooms.

With the ability to direct their own learning, ECD students also become able to gain knowledge for use as a professional in early learning, which is necessary for quality

improvement in early learning programs for young children (De-Souza, 2014). Ultimately, the early learning profession needs to ensure that such specialized knowledge is shared among its members in order to support high-quality programming and education to young children (Lutton, 2013). There is little empirical evidence specifically focused on early childhood professionals and their goal setting practices. However, research does demonstrate that "the knowledge, skills, and practices of early childhood educators are important factors in determining how much a young child learns," (Sheridan, Edwards,, Marvin, & Knoche, 2009, p. 377). So, as an early childhood education teacher develops their own goal setting and reflective practices, they can be supported to develop these same skills in the young children they teach.

Reflective Practices

Reflective practices and learning. Reflective practice is the evaluation component of metacognitive awareness and goal setting practices. Reflection can be simply defined as looking back to think (Hayes, Daly, Duncan, Gill, & Whitehouse, 2014). We can narrow the focus of the definition in the learning process to define reflective practice as responding to anything the learner feels is significant in their learning experience. Cross (1999), argues that learning is not just about an experience itself, but about the reflection of that experience and its relationship to future experience as well. Further, Loughran (2007) states, "reflection is a thoughtful process" but when paired with intentional learning, it is also an individualized skill and responsibility, (p. 25). Students vary in their abilities to be reflective and also in their tendencies to engage in reflection during learning.

This study focuses on reflective practice, or the tendency to engage regularly in reflection during learning, with the goal of improving learning. When we stop frequently to reflect we learn better (Facione, 2013). Reflection is an act to improve our thinking and learning. In terms of

scaffolding learning for novices, reflection is formally defined as, “remembering with analysis,” (Epstein, 2003, p. 29). As they learn and encounter difficulties in learning, students can write about thoughts, questions, feelings, connections, confusions, and experiences they have encountered. Schraw, Crippen, & Hartley, (2006) discuss the relevance of critical thinking skills and especially how important is it to “help students develop better metacognitive monitoring through explicit reflection,” (p. 124). This reflection on learning experiences and analysis of the experience is the forward thinking that creates knowledge of the content as well as the ability to apply that content.

Relationship between reflective practice and metacognition. Therefore, reflective practices are a way of supporting the development of metacognitive awareness (Kuhn, & Dean Jr., 2004). Research has shown that self-reflecting is developed when metacognitive thinking is part of the process for competent learners (Vitanova & Miller, 2002). Soldner (2003) supports that formal reflections have the potential to increase a student’s development of metacognitive awareness and improve their understanding and retention of what they are focused on learning. When students engaged in the learning process reflect, they are allowing time to engage in metacognition by consciously thinking about what they are thinking and learning. This effort needs to include taking time to reflect on learning and think about the information that has been presented (Strickland & Strickland, 2015). Such opportunities allow students the time to process learning and ask questions or address concerns during the learning process. This improves learning, because reflection provides students with the opportunity to “monitor their behavior, judges its outcomes, and react to those outcomes in order to regulate what they do” (Eccles & Wigfield, 2002, p. 125). Metacognitively-driven reflection therefore strengthens learning and increases student academic success by referencing ongoing learning to learning goals in order to

increase performance (Schunk, 2003). This heightened awareness of purpose in thinking serves as a function that improves metacognitive awareness and progresses toward goals.

Empirical research continues to support the importance of reflective practices in learning as a student uses reflection to help understand their own experiences in learning (Blank, 2000; Margaryan, Littlejohn, & Milligan, 2013; Rodman, 2010; Vitanova & Miller, 2002; Whipp, 2003). Blank (2000), showed that when students were asked to reflect upon their progress, that there was a great understanding of course materials in students. This formal pause to reflect is time spent thinking about their learning and how that aligns with the goals they have set for a specific course learning outcome(s) and/or task(s). Reflective practices therefore empower learners to make decisions about their own learning and to ensure they are making the best decisions possible (Bell, 2010). This self-monitoring in learning can guide the learner from goal setting to learning experiences and through their reflective practices.

However, future teachers may not have the skills to engage in this self-monitoring. For example, Margaryan, Littlejohn, & Milligan (2013), empirically support that there is a lack of deliberate and systematic reflective practices across all levels of learning and thus opportunities for developing the reflective practice of future teachers is vital. They also found self-reflection is fundamental to successful learning. The time given to "dedicated and sustained opportunities to reflect" supports developing the reflective skill to enhance learning, especially for teachers in the context of their work (Margaryan, Littlejohn, & Milligan, 2013, p. 255). Time on task to practice reflection provides constructive instructional experiences for improvement. The ability to reflectively engage in learning and improve on practice through high-quality reflective practices are factors relevant to this study.

Evidence that high-quality reflective practices can be taught. Simply taking time to allow students to reflect on the learning they have experienced in relation to the goals they have set is not enough. Commonly, students (i.e., novices in terms of reflective practice) will share superficial impressions and feeling, but not take to opportunity to connect their classroom learning to subject matter or challenge their assumptions (Eyler, 2002). When learning is incorrectly framed by students as memorizing facts, theories, and/or concepts to be rehearsed back in a superficial manner, students will not use reflective practices to "explicitly link new to previous knowledge and critically assess the nature of such connections," (Brownless & Berthelsen, 2005, p. 24). It is through these connections that students master content so that they can apply material.

Therefore, it is important to scaffold students' use of reflective practices to ensure that novices engage in meaningful, rather than superficial, reflection. Whipp (2003) found that scaffolding techniques (e.g., questioning, critical reading, modeling, and discussions) can be successfully used to develop higher levels of student reflection. In addition, Downey (2008) demonstrated the value of scaffolding with preservice teachers in a four-year institution that show critical thinking skills do not emerge by themselves. Scaffolding of reflection is a critical part of the reflective learning process. Based on empirical findings, Downey (2008) stated that, "preservice teachers need to participate in carefully scaffolded practice and insights about teaching with structured opportunities for reflection and critical thinking as early as possible," within their teaching program (p. 9). Instructional support for higher levels of reflection that will develop learning is necessary to the learner's experience. Rowley (2014)'s findings support scaffolding reflection as a dialogue, in which reflective discussions or writing act as a record of learning experiences for "students on their learning journey," (p. 29). Together these studies

support reflection as a tool for purposeful learning and demonstrate that reflection can be taught through targeted scaffolding.

Implications of reflective practices for community college students. Scaffolding of a novice learner's reflection develops higher level practices within the learning process, which can have profound implications for community college students. Figure 1 illustrates how this study focuses on community college students' need to have supported reflection built into their formal coursework. Community college students, as adult learners, need to have an opportunity to stop and think about what they are learning. Vukman (2005) found that one of the most important changes to effective learning in adulthood is using the "ability to reflect precisely on our own thinking processes," via metacognitive awareness, (p. 219). Including formal reflection in a community college student's daily routine can help guide and motivate the learner (De-Souza, 2014). Without this reflection, students may miss opportunities for learning and improvement.

Furthermore, community college students cannot be expected to gather useable knowledge for application from coursework without reflection. Schraw, Crippen, & Hartley (2006) reported that "critical reflection emphasizes the use of alternative perspectives and uses of knowledge and thinking," (p. 125). To integrate reflective practice into a community college students' routine provides them with the opportunity to learn deeply for application in their careers. Reflection is useful in it permits a community college student time to process concepts, think cautiously, contemplate options, and to review and revise their work (Facione, 2013). As instructors at the community college level, having students learn more efficiently and effectively through reflective practice may serve as an improvement to help deepen initial learning and close the theory-practice gap.

Intellectual reflection at the community college level is a benefit to strengthening the learning process. In general, instructors want to challenge their students and want them excel in their learning beyond what they already know to broaden their knowledge base and intellectually contribute to society (Facione, 2013). At the community college, the instructor's role is to educate and develop skills necessary to be successful in the professional workforce. There is empirical research that confirmed reflective thinking fosters meaningful connections to professional work (Balaji & Chakrabarti, 2010; Ellis, Goodyear, O'Hara, & Prosser 2007). This affirmation that critical reflection nurtures one's professional work is essential in the field of early childhood educators. Therefore, based on this review, reflective practices are an indispensable skill to teaching needs integrated into community college programs.

Reflective practices and teaching. Reflection is also an integral component of the teaching profession. Danielson and McGreal (2000) explicitly argue that, "few activities are more powerful for professional learning than reflection on practice," (p. 24). This is because reflective practices within pedagogy enrich the transfer and application of theory to classroom practice (Rodman, 2010). In other words, reflective practices are a way to help educators understand what they know as a means of teaching improvement (Loughran, 2002).

Reflective practices also help teachers to develop the self-awareness (Minnici, 2014) to make choices consistent with best practice, and thereby "lead teachers towards effective professional actions," (Iqbal, Jumani, & Chishti, 2015, p. 376). Reflective practices also have an impact on a teacher's self-awareness and can influence their decisions-making in the classroom setting (Rodman, 2010). Reflection is also a way for teachers to think about their instructional quality in order to develop and improve.

Reflection has also been shown to be "indicative of a way in which a teacher might learn and develop professionally," (Loughran, 2007, p. 25). Reflection on professional practice is a powerful activity for novice teachers to engage in, and is the foundation of developing professional competence within the complexities of teaching (Brownlee & Berthelsen, 2005; Danielson & Mcgreal, 2000; Rodman, 2010). Therefore, reflective practices have a powerful impact on both the preservice and inservice teaching professional.

An intentional teacher is one who has a purpose for the decisions they make and can explain that purpose to others (Bredekamp & Copple, 2009). To develop as an intentional teacher, reflection on instructional decision making must be part of one's daily routine because an intentional teacher uses reflective practices to make purposeful decisions about what to think and do (Facione, 2013).

Implications of reflective practices for ECD students. Based on this review, the current study assumes that an ECD student needs structured experience with reflection in order to endorse the importance of reflective practices being woven into their daily pedagogical practices once they become teachers. Furthermore, they must be taught that the goal of reflective practice is to see the effect of one's own actions and teaching (Hattie, 2012). This task, tied directly to metacognitive awareness, helps support a community college student to be prepared to enter the early childhood profession.

Iqbal, Jumani, & Chishti, (2015) provide support for framing formal opportunities for community college students in the ECD program to reflect in order to aid in their practice of developing into intentional and reflective practitioners. Their findings show that reflective practices require open-minded dispositions to result in better understand and improve students' own future teaching practices. Similarly, Rodman (2010)'s study with pre-service teachers at a

four-year institution found that they have the ability to develop a deeper understanding of the knowledge and skills they were to acquire through self-reflection when the instructor "encouraged and engaged them in thoughts about how the students they taught were affected by their thoughts about thinking and learning," (Rodman, 2010, p. 22). Ultimately, the results of these studies suggest that repeated reflective practices for teachers' preparation experiences "can be useful for encouraging growth and professional development," (Rodman, 2010, p. 31). This reflective practice would positively affect future pedagogical practices, and impacts goal setting in teaching and learning contexts.

Whipp (2003) reported that reflection in teacher education programs, "enables prospective teachers to develop the habit of continually learning from their experiences" (p. 322). Reflective practice of prospective teachers at the college level contains four components:

1. Taking a step back from their own assumptions and biases within their own experiences and practices,
2. Framing a problem within their own experience and practice through the lens of multiple perspectives,
3. Critiquing and reframing problems within broader perspectives, and
4. Taking calculated action that is cognizant via the reframing process (Whipp, 2003).

When an ECD student cycles through these four steps through their community college coursework, both in the classroom and in the real-world field setting, they build strong reflective skills that aid the quality of their pedagogical practices. "Reflective practice can act as the conduit between all essential ingredients required by a student to demonstrate an achievement of the requirements," for their high education program of study (Rowley, 2014, p. 36). Knowing

and practicing reflective practices actively improves the ability to monitor the decisions that are made about what and how they teach within the early learning profession (Rodman, 2010). However, in order for ECD students to improve in their learning and teaching, they need the opportunity to formally reflect and when necessary receive scaffolded instruction to reach a more complex level of learning.

Theoretical Framework

Vygotskian Theory. Lev Vygotsky's theory originated in Russia during the late 1920's and early 1930's, and over the last 80 years, his work has been examined, debated, and amended. There are different interpretations formed from the translations available of his original work, and also because his work was focused on the field of psychology and the development of a theoretical perspective, leading to varied interpretations when applied to teacher instruction. In fact, Vygotsky's contribution to teacher education was framed as action theory after his death (Gredler and Shields, 2004; Gredler, 2012). For this study, the focus will be in this Vygotskian approach to classroom instruction, which has strong theoretical implications for pedagogical practices to support student interaction as contributing factors to high-quality thinking (Martinez, 2006, p. 698). This perspective is a derivative of Vygotsky's theoretical work, but is not always seen as consistent with the direct intent of his original work.

As Vygotsky's original theory matriculated to the United States, it has been debated, tested, and built upon as our understanding of teaching and learning in the education field changes and grows. One example of differing perspectives for educators throughout the years is in two variant perspectives of the zone of proximal development (ZPD) that have stemmed from Vygotsky's theoretical framework. The biggest variant is that, "Vygotsky did not include the assistance of another in his definition of the zone of proximal development" (Gredler & Shields,

2004, p. 22), although this is how the theory is most often interpreted in teacher education. A Vygotskian classroom depiction of the zone of proximal development used for this study is one of the learner actively constructing knowledge through social interaction and support from others. In a Vygotskian framework, a key aspect of learning is often the "guide by others" approach (Stone, 1998; Van de Pol, Volman, & Beishuizen, 2010). This Vygotskian approach to teaching and learning is supported within the early learning community as an effective practice within the field. Often, a student's learning is viewed as dependent upon their interactions with the world, and through their collaboration with early learning teachers (Bredekamp, 2014). This study deliberately uses the Vygotskian classroom as a natural theoretical framework because modeling this approach is a key component to improvement for the early childhood education program at the community college. If early childhood education majors are to implement the ideals derived from the Vygotskian approach in their professional teaching and in their early learning classroom environment, it is logical to model these practices in the community college classroom.

Scaffolding of learning

The focus for this study is on the modeling of scaffolding as an instructional tool (Figure 1). Scaffolding is the support and guidance a student receives in the learning process. The theoretical construct of scaffolding was a derivative of the work of researchers over a span of more than 40 years (Van de Pol, Volman, & Beishuizen, 2010; Stone, 1998; Cazden, 1979; Ratner, & Bruner, 1978; Wood, Bruner, & Ross, 1976; Wood & Middleton, 1975). In Schmidt (2009), scaffolding is described as the support that bridges learning, and is essential to exploring ways of helping students become independent thinkers. Bell (2010) states that "scaffolding instruction refers to the supports provided to students to assist them in making cognitive growth

just beyond their reach" (p. 41). The support and guidance a student receives is based on their needs to gain knowledge that they cannot otherwise be accomplished independently.

There are specific roles individuals play within scaffolding. However, scaffolding recognizes the learner as an active, not passive, recipient of knowledge (Hadwig & Oshige, 2011). The novice is a learner in need of scaffolding to successfully complete a task and the expert is a more advanced learner who has mastered knowledge or skills necessary to successfully complete the task and provides some type of support to the novice. Scaffolding itself is presented in a wide range of ways, including modeling, questioning, visual cues, and nonverbal gestures, and is not intended to be permanent. Scaffolds are to be temporary, and "as the learner gains fluency in a skill, the supports are removed," (Bell, 2010, p. 41). This scaffolding process leads to self-confidence and capability on the part of the learner.

According to Land, Hannafin, and Oliver (2012), regardless of the support being used, scaffolding looks to serve one of the following functions:

- Conceptual: guidance related to a problem
- Metacognitive: guidance related to reflection, planning, and monitoring
- Procedural: guidance on the use of the learning environment
- Strategic: guidance on strategic approaches

This is valuable to consider because the scaffolding approach used should meet the function it is meant to serve. For this study, the scaffolding during the planning aspect of the student goal setting and the reflective practices were aimed to develop and improve the metacognitive awareness of the community college students in the course.

It is equally important to note that regardless of the scaffolding type and function, scaffolding should be presented using the following instructional guidelines. First, the expert

must evaluate how much assistance is needed as to not make a task easier for the learner, but to help aid their understanding of the task or skill at hand. Second, as scaffolding is in progress, the responsibility of performance is transferred to the novice learner through the support presented by the expert. Finally, the ultimate goal of scaffolding is to be a temporary support that is faded as appropriate to lead to the novice learner's independence and mastery.

Scaffolding is a critical component to the learning process, because it aids the learner in their ability to extend their thinking and doing in their own learning. Instruction that utilizes scaffolding, allows the learner to solve a problem, carrying out a specific task, or achieve a set goal that they otherwise would not be able to do on their own (Puntambekar & Hubscher, 2005). This support to extend a student's thinking and processing of knowledge is an important component to active learning. The research of Hultberg, Plos, Hendry, & Kjellgren (2008) found that scaffolding students for self-directed learning was a foundational need in higher education. Furthermore, Balaji & Chakrabarti (2010) found that scaffolding techniques used by instructors "reduced the task ambiguity and improve the interest and motivation of the students" (p. 16).

Effective instruction for community college students in the ECD program should therefore actively model scaffolding in coursework when and where it is appropriate. In the early stages of learning new content and pedagogical practice, scaffolding should be more structured (Ludwig-Hardman & Dunlap, 2003). Structured scaffolding includes encouraging the learner to articulate their learning goals and plans, and providing opportunities for reflective evaluation of their learning progress (Ludwig-Hardman & Dunlap, 2003). However, the level at which explicit structure is faded by the instructor should vary based upon the learners needs.

In addition, by scaffolding when appropriate, the instructor can guide students' attention to important learning goals and reflection on their progress in aid of developing metacognitive

awareness (Balaji & Chakrabarti, 2010; Ellis, Goodyear, O'hara, & Prosser, 2007; Hmelo-Silver, Duncan, & Chinn, 2007; Gilbert & Dabbagh, 2005). In order to do this effectively, instructors must align their scaffolding with the students' own goals and reflection (Ludwig-Hardman & Dunlap, 2003).

Overall, using scaffolding as an instructional tool "holds promise for teacher education by offering the possibility for integrating approaches that emphasize development toward a standard of competence, development of a personal orientation towards teaching, and reflective inquiry (van Huizen, van Oers, & Wubbels, 2005, p. 285). This study analyzes the use of scaffolding in terms of students' goal setting and reflective practices throughout the duration of the semester.

Conclusion

This literature review presented information on three major areas (metacognitive awareness, goal setting, and reflective practice) as targeted for improvement through scaffolded instruction for community college students in an ECD program. Research was provided on the importance of metacognitive awareness for student learning in generally and its particular importance to ECD students at the community college level. In addition, goal setting and reflective practices are important elements of metacognitive awareness, and have been shown to be effective in developing quality, intentional early learning teachers. Scaffolding has been demonstrated to effectively guide students' goal setting and reflective practices, and develop their metacognitive awareness. In addition, scaffolding is an element of developmentally appropriate practice and should be modeled for future early childhood teachers. This research focuses on scaffolding goal setting and reflective practices as an intentional practice in order to improve the metacognitive

awareness of ECD students and thus improves the pedagogical practices in the early learning field.

CHAPTER III: DESIGN FOR ACTION

This chapter restates the overall purpose and research questions that focus this study. It details the research methodology, the role of the researcher, from a quantitative and qualitative perspective, and the population and sample being studied. The explanation of methodology is followed with data analysis and explanation of the quantitative results and qualitative findings.

Research Questions

The intended purpose of this study was to investigate the following research questions:

1. What kinds of goals do community college students in an early education and child development course set at the start of the semester?
2. Does the quality of community college students' goal setting improve with scaffolding?
3. Does the quality of community college students' intentional reflection on learning and practice improve with scaffolding?
4. Does the community college students' metacognitive awareness change given experiences with scaffolding two theoretical components of metacognition (goal setting and intentional reflection) and with practical experience in an early childhood classroom?
5. Do community college students' self-evaluate their teaching practices similarly to the instructor?

Methods of Investigation for Change

This section details the methodology for this study. Overall, a mixed methods research design approach was selected to appropriately answer the research questions. Specifically, this

was an exploratory mixed methods design approach which allowed for quantitative data drawn from an appropriate, reliable, and valid measure used with the population of in-service and preservice teachers as well as normal classroom assessment (i.e., regularly used course rubrics) as well as qualitative data from the instructor's reflective journaling to create an overall useful and realistic picture of the context (Mertler & Charles, 2011). The qualitative journaling was collected to help support and/or explain the quantitative rubric scores at the end of the study.

Research Participants

A convenience sample of the community college students registered in the capstone early education and child development (ECD) practicum course was used to be representative of the larger population of ECD students at this community college. This practicum course has a cap of 16 students per section, and there were two sections offered on two different campuses of the community college. These courses were chosen because they were both taught by the primary investigator, and because they offer both typical classroom experiences and realistic field work in early childhood settings.

Following the college enrollment period, there were 5 students enrolled in one campus section and 8 students enrolled in another campus section. Informed consent was obtained from all 13 students (see informed consent procedures below).

Demographics of participants. Of the 13 total students, all were female and 12 or the 13 were from the same county. All 13 students were ECD majors and 2 of the 13 were also working on the children with special needs certification as well.

The typical age for a community college student is 29 (American Association of Community Colleges, 2017). There were 10 students under the average age of a community college student and 3 students were over the average age of a community college student.

Of the 13 students, 6 were currently working in the early childhood field in some capacity. The current positions were reported in 4 categories: One student was a teacher in a childcare center, one student was an assistant teacher in a childcare center, one was a part-time nanny, and three were substitute assistant teachers in a childcare center.

The plans to use their ECD degree after graduation were classified into the following categories. Seven students wanted to apply as lead teachers in a childcare center. Two students were transferring to a 4-year institution to work on earning a bachelor's degree in PreK-Grade 4. One student wanted to open her own childcare facility, one student planned on applying for a full-time nanny position, and one student planned on seeking a supportive service position (citing the intermediate unit as an example). Last, one student reported that she wanted to apply for a public school teaching position in kindergarten or 2nd grade, even after a one-on-one consultation regarding teacher certification requirements specific to the state of Pennsylvania. In total, all of the students in this course were planning on being a part of the early childhood field in some professional capacity, and therefore content learning would contribute to their success in the course and future professional careers.

Protection of human subjects. The following section explains the procedures that were explicitly used to protect the human subjects of the community college students in the course. These procedures were to protect the ethical rights of the students and eliminate undue coercion from the dual rule I had as researcher and instructor of the course.

Informed consent procedure. The instructor, in the presence of a community college representative, gave a brief summary of the study and offered to answer any direct questions from the students. Participants were informed that they would be participating in all course related activities even if they chose to not allow their data to be used for the study and that they

could withdraw their participation in the research until the last class meeting; however, no one withdrew.

The instructor then left the classroom so that the students could ask the community college representative questions that would remain anonymous to the instructor. There were no questions asked for clarification. The instructor remained out of the room when the students were asked to sign the formal consent to participate in a research study form (Appendix B). The consent forms remained in the possession of the community college representative for the remainder of the semester until the instructor submitted final grades for the course. Prior to final grades being submitted, the instructor only knew the number of students who had elected to participate. Data analysis occurred after final grades were submitted.

Researcher Participant. In addition to the sample of community college students, I also participated in this study as the instructor of both sections of this practicum course. The research questions for this study were chosen as a means of improving instruction at the community college level in the ECD program, specifically starting with my teaching practices. I determined it would be valuable to keep a reflective journal as a data source that could contribute to the understanding of the quantitative results. The information in the research journal focused on my experiences as an instructor for the practicum course. No student names or identifying numbers were ever written in the journal, and I have reported findings without identifying individual students. The journal was informative for instructional improvements, and the data in the journal had no bearing on the graded outcomes of the course. Both quantitative and qualitative data analysis occurred after final grades were submitted.

Data Sources and Instruments

Participant data included a survey, three rubrics, and a researcher's journal.

Survey. The survey was the Metacognitive Awareness Inventory for Teachers (MAIT, Balcikani, 2011), created to measure the metacognitive function of educators. To create the MAIT, the original Metacognitive Awareness Inventory (MAI, Schraw & Dennison, 1994), was adapted to address items that focused directly on teaching. This led to the development of the 24-item survey, which was adapted for use in this study (Appendix C). The original MAIT (Balcikani, 2011) has a Likert scale of 1 - 5 but for this study, it was adapted to use a 1 - 4 scale (strongly disagree – disagree – agree – strongly agree). Schreiber and Asner-Self (2011), Mertler and Charles (2011), and Mertler (2006) indicate that there is no agreement whether a middle category is acceptable. Schreiber and Asner-Self (2011) argue that even-numbered Likert-scales without a middle or neutral category "force the respondent to choose a side" (p. 133). A middle or neutral category provides people with an option to "avoid thinking about how they truly feel; which may not represent their true belief" (Mertler & Charles, 2011). For this research, I felt it was important for students to respond to the question with their perception falling on a distinct side of the scales continuum.

Rubrics. There were also three course rubrics utilized in this study: the SMART Goals Rubric (Appendix D), the Reflection Rubric (Appendix E), and the Teaching Presentation Rubric (Appendix F). Each rubric assessed students on a 0 - 3 scale.

The Goals Rubric (Appendix D) measured the goals the student set in relation to learning outcomes of the course. Although specific to the course, this goals rubric is an adaptation of the SMART Goal Rubric (n. d.), with five distinct goal setting categories: Specific, Measurable, Achievable and Ambitious, Relevant, and Timely.

The second rubric was the Reflection Rubric (Appendix E). This rubric was an adaptation of a refection rubric from Jones, (n.d.) and assessed five categories: Clarity,

Relevance, Analysis, Interconnections, and Self-Criticism. The five areas of focus were designed to measure how students make meaning from their learning experiences in accordance with the course learning outcomes and the goals they established.

The final rubric utilized in this study is an adaptation of the Teaching Presentation Rubric (n.d.) with changes made to be specific to the requirements of the ECD program and its NAEYC accreditation standards (Appendix F). This rubric assessed ten categories of the lesson taught by the early education and child development student in their practicum field site. The ten criteria included in the rubric were: knowledge of subject matter, communication skills/clarity/confidence, method of presentation, voice, visual contact, evidence of preparation, orderly sequence, use of early learning standards, National Association for the Education of Young Children (NAEYC) standard analysis, and professional reflection.

The use of rubrics in this research allowed the study to align to the learning outcomes of the ECD course in a meaningful way. The rubrics also upheld the rigorous standards of assessment in relation to accreditations held through NAEYC and the community college's Middle States accreditation self-study process. As such, the rubrics are potentially valuable to incorporate these rubrics into other sections of this course across the community college campuses. Finally, the rubrics were utilized because they have potential to result in positive improvement in the teaching and learning throughout the course.

Instructor's journal. In addition to collecting student quantitative data in the forms of the survey and 3 rubrics, I also used personal, reflective journaling as a component to data collection. For this study, the term journal is defined as, research-focused reflective writing by a researcher (Borg, 2001, p. 157). Furthermore, Borg (2001) states that reflective writing provides a beneficial perspective of one's personal experiences both to the writer and the reader. My

instructor's journaling focused on my experiences teaching this course as it related to this study. I wrote in my journal to reflect on my own instructional practices along with the intent of analyzing the journal to share with the reader of this research as well. My instructor's journal included my personal intentional reflections, and anecdotal observations, in addition to relevant student questions, comments, and concerns. This practice was used because reflective journaling is an efficient tool for educator's to grow as a professional with the beneficial outcome of understanding their experiences (Borg, 2001). For this study, the focus of the reflective journal entries were based upon the research questions. The entries included reflections on metacognitive awareness, goal setting, reflective practices, scaffolding, and teaching practices. All student-focused entries were written anonymously.

Data Analysis

The data analysis in this mixed-methods research includes the quantitative data from the MAIT survey and 3 rubrics (Goals Rubric, Reflection Rubric, and Teaching Presentation Rubric) used in this study and the qualitative data from the instructor's research journal written during this study.

Quantitative. The Goal Rubric, Reflection Rubric, Teaching Presentation Rubric, and MAIT survey data analysis included exploration of mean responses to the total instrument and components of the rubrics at each time point. Since the Goal Rubric, Reflection Rubric and the Teaching Presentation Rubric were all presented at two time points, dependent (paired) t-tests were used to analyze change in student responses over time. Since the MAIT survey data was collected over three time points in the semester, a repeated-measures analysis of variance (ANOVA) was used to analyze change in metacognitive awareness over time.

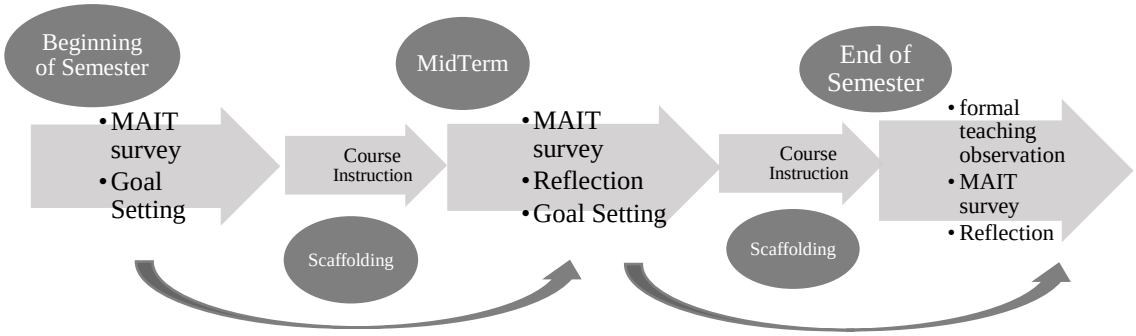
Qualitative. The instructor's research journal was used as an ongoing record of observations, student comments, and reflective thoughts throughout the semester. After the semester ended, analyze of the findings began. The analysis of my journal aligned with the five step process Taylor-Powell and Renner (2003) outlined in their work. According to Taylor-Powell and Renner (2003), step 1 is to "get to know your data (p. 2). My journal was initially read through, and then reread two more times. This step was used to evaluate what may or may not be of value to this research. Step 2 in this process is to "focus on the analysis" (Taylor-Powell & Renner, 2003, p. 2). At this step, I analyzed the journal for ideas that focused on the main concepts of this study (metacognitive awareness, goal setting, reflective practice, scaffolding and practicum teaching presentations). Again, this was done three times to thoroughly analyze. Step 3 is to "categorize information" (Taylor-Powell & Renner, 2003, p. 2). As ideas and comments were collected, they were grouped into those major theme categories as relevant to this study. Again, going over the grouping of ideas and comments three times to review and recheck against the journal was for thoroughness of the analysis. Step 4 is to "identify patterns and connections within and between categories (Taylor-Powell & Renner, 2003, p. 5). During this step, the coding of the journal focused on presenting findings that were of importance to the main concepts of the research while looking for relevant ideas and support to compare and contrast to the quantitative data. Lastly, step 5 is "interpretation – bringing it all together" (Taylor-Powell & Renner, 2003, p. 5). Ultimately, the interpretation of the findings was used to help make conclusions and recommendations on the research along with the quantitative data.

Implementation

The implementation phase of this research took place over the course of one 16-week spring semester. Figure 3 illustrates a timeline of when instructional improvements and data collection occurred.

Figure 3

Course and Data Collection Timeline



At the beginning of the semester, prior to instruction in course content, students completed the Time 1 measures. These included the MAIT and the "looking ahead" assignment (Appendix G) that was assessed with the Goals Rubric.

As part of the "looking ahead" process, the instructor and the students together reviewed the learning outcomes for this specific practicum course. Students then engaged in a think-pair-share format, in which they generated goals for themselves in relation to each of the 7 learning outcomes set for the course. The instructor individually contributed as needed while the students worked on setting their goals. As the ECD students began to wrap up, they were "paired" up with another student in the class, or two since a class had odd numbers, and discussed where they

stood in the goal setting process. The ECD students discussed learning outcomes they did not have goals written for yet and worked together to address concerns and formulate questions to share in pairs with the instructor or during the final sharing phase. As our class came back together, we "shared" our experience in the process and addressed specific questions and concerns that had arisen during this think-pair-share process. ECD students were also given the opportunity to share their goals. This think-pair-share instructional format was followed because students had never formally goal set for an ECD course. These measures were taken so goal framing was supported in a usable way.

The following week's class began the first instructional phase. The instructional routine followed a similar format weekly. Prior to the start of each class, we reviewed the learning outcome(s) applicable for that day and discussed where we are heading in our learning. We then reviewed what was done over the course of the week prior for course assignments and practicum experiences, and addressed how we would get from the learning outcome prior to the next learning outcome we would tackle. For this particular course, we focused on three learning outcomes during the first half of the semester:

1. Observe and document children's behavior and development.
2. Demonstrate written and verbal competency in observation reporting.
3. Apply appropriate theories of growth and development.

During this time, students were also approved for their field practicum site in an infant - 4th grade classroom.

In this study, scaffolding was defined as the instructional support and guidance a student received based upon their needs to gain knowledge that they could not otherwise accomplish independently. Instructional support was built into the course planning and then individual

guidance was implemented as needed as students progressed through the course. For these specific learning outcomes, planned scaffolding was as follows: Child case studies were prepared dependent upon each student's observational needs. In this instance, students were asked to draw a map of the classroom to provide a visual representation of the child's movement in the environment to aid in reporting observational details. In practicing their written and verbal competencies, students were provided a checklist of effective teacher behaviors (Good & Brophy, 1997) to reflect upon prior to their written assignments and practicum teaching experiences. They also reread the NAEYC Position Statement: Code of Ethical Conduct and Statement of Commitment (2011), and participated in a think aloud prior to course work requiring them to observe and practice ethical and professional ideals. There was also a theory/theorist chart with a review packet that was provided to guide the students in finding examples in their field placement of at least five aspects of theories/theorists evident in real-world teaching practices. From this, the students were to write about specific theoretical ideas used in the classroom. They were reminded to include a NAEYC standard analysis of their own professional learning. As needed scaffolding included building on the prior knowledge and experience they had with theoretical course content in previous courses. We also discussed explicit examples from their current practicum site experiences. Then, we reviewed the rubric criteria for this specific assignment, and answered student questions.

The midterm provided a natural break in instruction, and the instructor used this time to collect Time 2 measures. The instructor and students took pause after completing the second MAIT in class and revisited the looking ahead goal sheets that were completed at the start of the semester. The students looked at the goals that they had set for the learning outcomes during our initial think-pair-share formatted instruction at the beginning of the semester. The students were

given time to review and revise the goals that they had set at the beginning of the semester. Again, the Goals Rubric was utilized.

In addition, students completed a written critical reflection of their learning progress in relation to their goal setting. To scaffold this process, the students individually graded their own goals using the Goals Rubric. They were then provided the Reflection Rubric and given time to reflect in class, while the instructor was available for questions and support as needed. They had additional time outside of class as well. Formally, the instructor then used the Reflection Rubric to measure the depth and sophistication of the students' reflection on their own learning experience.

The second instructional phase focused on their lesson teaching, final portfolio development and professional proficiency as intentional teachers. Students needed to plan and implement a lesson within their practicum field placement. Their planning was based on course content learning and observational data they collected in field observations. This information was a guide to their planning in terms of developmentally appropriate practice which reflected the children's interests, abilities, and learning styles. Lesson planning was done under the direction of the course instructor as well as the ECD student's site supervisor to ensure proper support was given throughout this planning phase.

The course instructor and ECD student coordinated the specific date and time that the student taught so that the instructor could be on site to formally observe the ECD student teaching the lesson. For this experience, the Teaching Presentation Rubric (Appendix F) was used to evaluate the student teaching.

The students were provided the Teaching Presentation Rubric prior to planning their lesson. Each category was reviewed and practice pedagogical examples were provided as

needed. Students were required to submit written lesson plans for approval both to the instructor as well as the teacher at their practicum placement. Plans were reviewed and adjusted as needed. In some cases, practice teaching lessons with peers was provided and I also used modeling to scaffold development in lesson planning activities.

The Teaching Presentation Rubric was used as a catalyst for the conference that the instructor and ECD student had after the lesson was taught and the student had formally reflected on his/her teaching experience. This conference served as an informative feedback session to discuss the strengths and areas for improvement between the instructor and the ECD student at the end of the semester. The Teaching Presentation rubric, the students' written reflections on learning progress in relation to the goals revised at midterm, and the instructor's observational notes were used to guide this feedback session. The Reflection rubric assessed student progress in critical reflection.

In summary, students complete the MAIT and initial goals at the beginning of the semester. The instructor then provided instruction, during which she scaffolded goal setting. At midterm, students completed the MAIT and revisited and revised their initial goals. The instructor also provided an opportunity for students to critically reflect on their learning progress in relation to their initial goals. The quality of initial and revised goals was assessed using the Goals Rubric and the quality of reflection was assessed using the Reflection Rubric. In the second half of the semester, instruction was paired with scaffolded reflection. Students focused on lesson planning and developmentally appropriate practice. Students taught lessons in the field and the Teaching Presentation Rubric was used for both self-assessment and instructor assessment. At the end of the semester, a final MAIT was collected and students were asked to reflect on their progress in relation to goals set at midterm. Reflections were again assessed

using the Reflections Rubric. Throughout the course, I also reflected on my use of scaffolding and instructional experiences through journal writing.

Quantitative Results

The following is a report of the quantitative results for the research questions based on the data collection from the MAIT survey, the Goals Rubric, the Reflections Rubric, and the Teaching Presentation Rubric.

Quality of Student Goal Setting

A quantitative analysis of the quality of students' goals was measured using the Goals Rubric (Appendix D). Because the Goals Rubric ranges from 0 – 3 in each of the five categories specific, measurable, achievable/ambitious, relevant, and timely, the total possible score was 15.

Means and standard deviations of the Goals Rubric are reported in Table 1. At the beginning of the semester, the class demonstrated considerable variability with a range of total scores from 7 to 13. The mean total score increased from 10 to 12 at midterm of the semester, but the variability decreased slightly, with scores ranging from 10 to 15.

Table 1

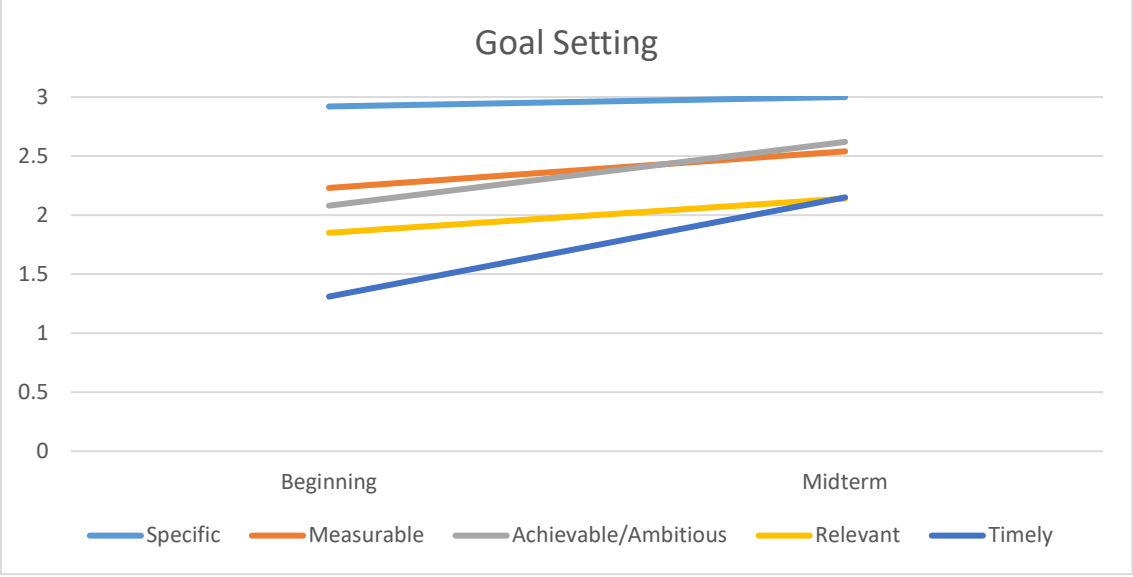
Means and Standard Deviations for Goals Rubric Scores

	Beginning		Midterm	
	M	SD	M	SD
Specific	2.92	0.28	3.00	0.00
Measurable	2.23	0.60	2.54	0.52
Achievable/Ambitious	2.08	0.49	2.62	0.51
Relevant	1.85	0.38	2.15	0.56
Timely	1.31	1.03	2.15	0.80
Total	10.38	1.61	12.46	1.51

The improvement from beginning of semester to midterm in each of the five components of the Goals Rubric is reported in Figure 4. The community college students in this course were most proficient in the "specific" category. This category assessed the clarity of the focus for a desired outcome with the goal set. The students were least proficient in the categories of "relevant" and "timely". Relevant assessed whether the student made a connection to their prior knowledge, experience, strengths, needs and/or growth in teaching. The timely category looked for the relationship of the goal to a definitive date of accomplishment.

Figure 4

Mean Student Goal Setting Scores by Goals Rubric Component from Beginning of Semester to Midterm



An examination of mean differences using t tests indicated significant improvements occurred in the categories of "measurable" (t (12) = -2.309, p = .040], "achievable" [t (12) = -3.742, p = .003], "timely" [t (12) = -3.395, p = .005], and the total rubric scores [t (12) = -4.269, p = .001] as reported in Table 2. Significance was determined at $p < .05$. The measurable category is the indicator the evidence of progress will be measured by. The achievable/ambitious category looked at the aligned of the goal to the course learning outcomes. The timely category, one of the areas students were least proficient, showed significant growth from the beginning of the semester to midterm.

Table 2

Paired t-Test Results for Student Goal Setting

Paired Beginning – Midterm	t-value	Degree of Freedom	p-value
Specific	-1.000	12	0.337
Measurable	-2.309	12	0.040
Achievable/Ambitious	-3.742	12	0.003
Relevant	-1.760	12	0.104
Timely	-3.395	12	0.005
Total	-4.269	12	0.001

Quality of Reflection

A quantitative analysis of the quality of students' reflective practices on their goal setting was measured using the Reflection Rubric (Appendix E). Because the rubric ranges from 0 – 3 in each of the five categories (clarity, relevance, analysis, interconnections, and self-criticism), the total possible points a student could earn was 15.

As indicated in Table 3, the first reflection at midterm had a mean total score of 7 points. The range of the mean total scores was 9, with a high total score of 12 and a low total score of 3.

The mean total score at the end of the semester was 11 points. The range was again 9, with a high total score of 15 and a low total score of 6.

Table 3

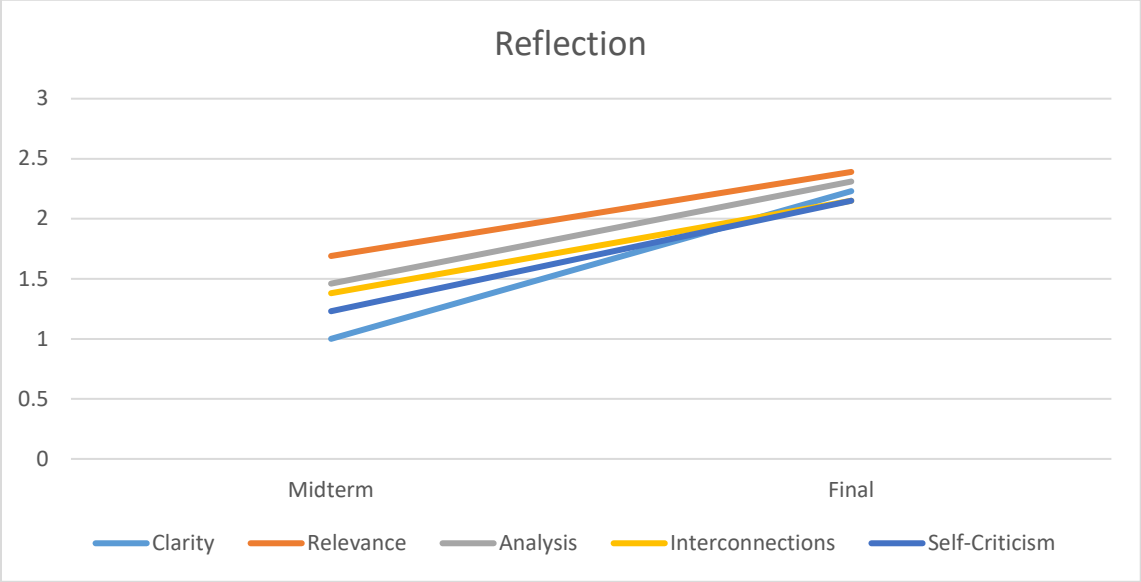
Means and Standard Deviations for Reflection Rubric Scores

	Midterm		Final	
	M	SD	M	SD
Clarity	1.00	0.58	2.23	0.83
Relevance	1.70	0.48	2.38	0.65
Analysis	1.46	0.66	2.31	0.63
Interconnections	1.38	0.65	2.15	0.69
Self-criticism	1.23	0.60	2.15	0.69
Total	6.77	2.37	11.23	3.14

The students' improvements in mean scores from midterm to the end of the semester for each of the five components of the Reflection Rubric are reported in Figure 5. The students were most proficient in the "relevance" category. This category assessed students' reflections in relation to a meaningful analysis between the student's goals and the course learning outcomes. The students were least proficient in the categories of "interconnections" and "self-criticism". The interconnections category assessed whether a student made a connection between learning experiences and materials of this course to past learning experiences and materials, and/or goals set. The self-criticism category indicates the students' ability to question their own biases, stereotypes, and/or assumptions.

Figure 5

Mean Student Reflection Scores by Rubric Component from Midterm to Final



An examination of mean differences using t tests indicated significant improvements occurred in all categories of the Reflection Rubric, (clarity, relevance analysis, interconnections, and self-criticism) including the total scores, as reported in Table 4. Significance was determined at $p < .05$. The clarity category assessed use of language that is clear, expressive and accurately explained abstract concepts providing the reader with a "mental picture". The relevance category is a reflection rooted in meaning for the student and the course learning outcomes. The analysis category indicates the experience contributed to the student's understanding of self, others, and/or the course learning. The interconnections category assessed making connections between the learning experience and materials from the course to past learning experiences and materials and/or personal goals set. The self-criticism category

assessed the student's ability to question their own biases, stereotypes, and/or assumptions to define new modes of thinking.

Table 4

Paired t-Test Results for Student Reflection

Paired Midterm – Final	t-value	Degree of Freedom	p-value
Clarity	-6.121	12	0.000
Relevance	-5.196	12	0.000
Analysis	-8.124	12	0.000
Interconnections	-3.825	12	0.002
Self-criticism	-4.382	12	0.001
Total	-6.796	12	0.000

Metacognitive Awareness of Teaching

A quantitative comparison of the pre-survey, midterm survey, and post survey of the Metacognitive Awareness Inventory for Teachers, (MAIT, Appendix C) was examined. This provided the data to assess how students' metacognitive awareness changed given experiences with scaffolding two theoretical components of metacognition (goal setting from the beginning of the semester to midterm and intentional reflection from midterm to the end of the semester) and with practical experience in an early childhood classroom near the end of the semester. With 24-items and four response options, the total score on the MAIT ranges from 24 to 96.

At the start of the semester, the mean total score was a 67 on the MAIT. As indicated in Table 5, the mean increased to 74 at midterm and 77 at the end of the semester. Variability in total score also increased over the semester.

Table 5

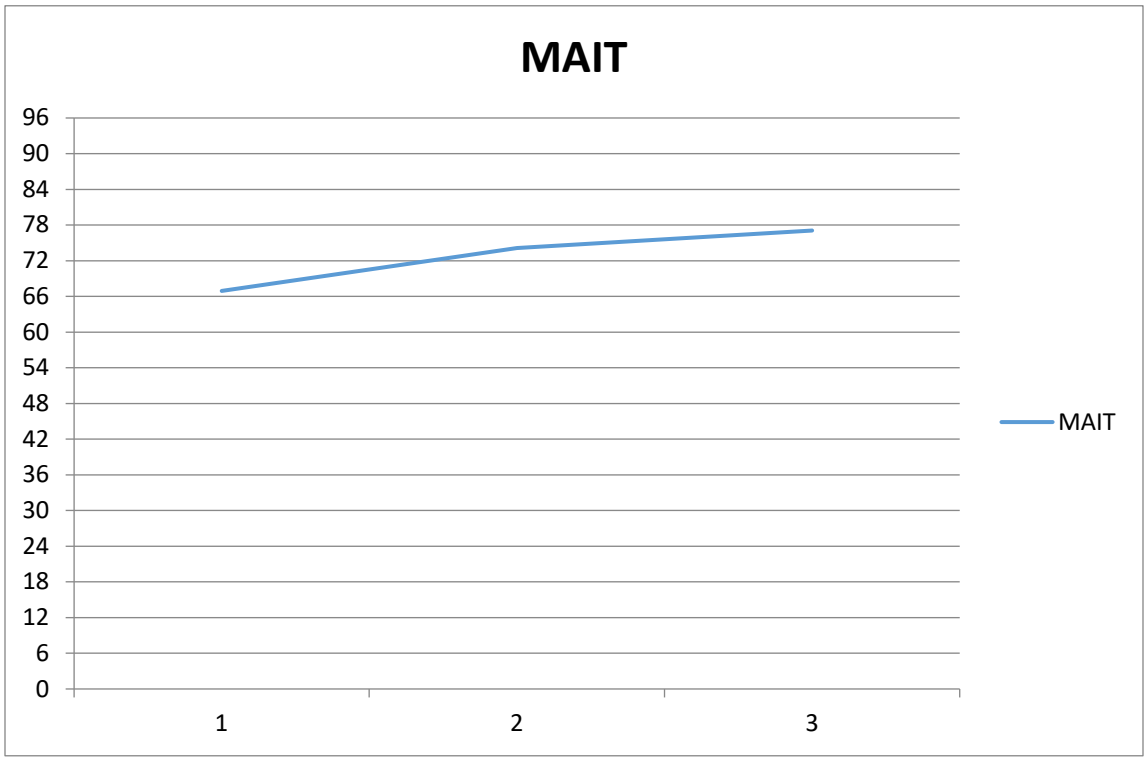
Means and Standard Deviations for MAIT

	Beginning	Midterm	Final
M	66.9	74.2	77.1
SD	8.2	9.2	10.9

Figure 6 shows the improvement in metacognitive awareness of teaching over the semester. A repeated-measures analysis of variance (ANOVA) indicated significant change over time [F (2, 36), = 3.93, p = 0.029]. Post hoc analysis indicated that improvement happened from the beginning of the semester to midterm (p = .029) with no significant change from midterm to the end of the semester.

Figure 6

Student Mean MAIT Scores at Beginning (1), Midterm (2), and Final (3)



Teaching Presentation: Student Self-Evaluation and Instructor Evaluation

A quantitative analysis of the Teaching Presentation Rubric (Appendix F) provided was used to assess how similarly the students and the instructor evaluated student use of developmentally appropriate practice.

The Teaching Presentation Rubric used a 0 – 3 range for each of the 10 categories (knowledge of subject matter, communication skills/clarity/confidence, method of presentation, voice, visual contact, evidence of preparation, orderly sequence, use of early learning standards, NAEYC standard analysis, and professional reflection), resulting in a possible total score of 30.

The student and instructor data are presented in Table 6. In general, the mean score of the students in the categories of use of early learning standards, NAEYC standard analysis, and professional reflection were higher than that of the instructor's mean scores. The use of early learning standards is the consistent accompaniment of Pennsylvania Early Learning Standards (2014), as well as activity-specific learning objective(s) to articulate proprieties for high quality, meaningful experience in each content area with outcomes that connect to professional standards. The NAEYC standard analysis refers specifically to what the student has learned from this specific teaching experience pertaining to the targeted NAEYC standard and key element. The professional reflection shows consistent understanding of theory and makes clear and specific connections between prior learning experiences and their teaching. The professional reflection includes in-depth, probing questions for future inquiry. Student and instructor ratings were most variable in the category of the use of early learning standards.

Table 6:

Student and Instructor Means and Standard Deviations for Teaching Presentation Rubric

Criteria	Student		Instructor	
	M	SD	M	SD
Knowledge of subject matter	2.69	0.48	2.62	0.65
Communication skills/clarity/confidence	2.54	0.66	2.38	0.77
Method of presentation	2.23	0.73	2.15	0.99
Voice	2.38	0.65	2.46	0.78
Visual contact	2.62	0.51	2.62	0.65
Evidence of preparation	2.38	0.65	1.92	0.76
Orderly sequence	2.46	0.78	2.08	0.64
Use of early learning standards	2.38	0.96	1.69	1.49
NAEYC standard analysis	2.23	1.09	1.62	1.33
Professional reflection	1.92	0.95	1.23	0.93
Total	23.84	4.02	20.77	5.90

An examination of mean differences using t tests indicated significant discrepancies occurred in the categories of "evidence of preparation" [t (12) = 3.207, p = .008], and "professional reflection" [t (12) = 2.420, p = .032] as reported in Table 7. The evidence of preparation category assessed a comprehensive ability to organize and execute the lesson taught. The professional reflection category evaluated consistent demonstration of understanding in the theories and research underlying the focus of the lesson content, making clear and specific connections between prior learning experiences and this learning opportunity.

Table 7

Paired t-Test Results for Student and Instructor Evaluations

Paired Student – Instructor	t-value	Degree of Freedom	p-value
Knowledge of subject matter	0.433	12	0.673
Communication skills/clarity/confidence	1.000	12	0.337
Method of presentation	0.433	12	0.673
Voice	-0.365	12	0.721
Visual Contact	0	12	1.000
Evidence of preparation	3.207	12	0.008
Orderly sequence	1.806	12	0.096
Use of early learning standards	2.112	12	0.056
NAEYC standard analysis	1.760	12	0.103
Professional reflection	2.420	12	0.032
Total	2.152	12	0.052

Summary of Quantitative Results

Quantitative results indicate that students improved in some elements of goal setting and all assessed elements of reflective practice. As expected from the literature review, improvements in goal setting and reflection co-occurred with improvements in metacognitive awareness. However, improvements in metacognitive awareness occurred primarily during the

first half of class, when the instructor was focused on scaffolding goal setting. Although student ratings of their own teaching mostly aligned with the instructor's ratings, there were key discrepancies in evidence of preparation and professional reflection.

Qualitative Findings

Qualitative analysis of the instructor's reflective journal was undertaken to explore the instructor's perceptions of the instructional intervention (scaffolding) and students' responses to the content being scaffolded (goal setting and reflective practice). The journal also served as an authentic model of engaging in reflective teaching. In the following sections, the journal entries are described and summaries of entries pertaining to the goals of this study are presented. The major themes related to two broad categories: the difficulties experienced by students and my instructional efforts made to scaffold learning in response to the student products of goal setting and reflection. The details of these findings are presented as I identify some anecdotal records that support ongoing development of students' metacognitive awareness. In addition, I documented my use of scaffolding techniques and these are presented as well.

Instructor's Journaling

Between the two sections that ran from January to May as a 16-week course, there were a total of 30 instructional days and 2 final days during which I journaled. In general, I used the journal to record and reflect upon events and comments from the course. These journal entries were completed after the formal class time had ended as to avoid interference with daily instruction. Typically, I wrote in bullets or paragraphs ranging from one to two pages in length. I supplemented my journal with recording additional comments and questions made by students outside of our formal class. I also made note of any comments, patterns, or practices students reported about their teaching at their practicum site.

Not every journal entry provided data relevant to this research (i.e. content relevant to the framing of this study, including metacognitive awareness, goal setting, reflective practices, developmentally appropriate teaching practices, scaffolding, and my intentional reflection on instructional improvements). The thematic findings presented here within two broad categories: difficulties experienced by students and instructional efforts made to scaffold learning are based on thematic analysis of 20 relevant journal entries as they were most relevant to the research variable listed above.

Difficulties Experienced by Students

Initial unfamiliarity and difficulty with goal setting. During the first two classes of the semester, we took the time as a whole group to review the course syllabus, which included the course learning outcomes listed on the first page. In the classes that followed two weeks later, we started our goal setting practice on the looking ahead sheet (Appendix G). At the initial Time 1 goal setting, I anecdotally noted that only 2 out of the 13 students recognized the course learning outcomes that were directly from their syllabus. This suggests a lack of previous experience using the course learning outcomes for formal goal setting.

In addition, my record of student questions demonstrates unfamiliarity with the process of goal setting. For example, one particular question from a student was, “What is observational reporting, and is it something that I do verbally?” Another student wrote an ambiguous goal that stated, “Learn theories better,” and then asked further questions about how she could learn the theories better and how she could better use the theories. I also noted a question about how to decide what is appropriate to put in professional portfolios, and I worked individually with that student to review the portfolio checklist, rubric, and information sheets that we had previous used in the 2 weeks prior to help answer some of her follow-up questions.

The journal also provides explicit records of student reports of difficulty with goal setting. I kept tally marks in the journal when a student indicated that goal setting was difficult. At some point or another during the semester, every student indicated goal setting was difficult and seven reported the difficulty stemmed from their lack of experience.

I also recorded when students explained the perceived cause of their difficulties with goal setting. For example, one student said that she was, "Confused by goal setting and it was such a struggle to complete." Another student's response echoed this confusion, stating that her difficulty was due to not understanding the purpose of goal setting. She reported that she was confused by the need to write goals if she was already giving her best effort. This confusion about effort and goal setting demonstrates that students may not understand the purpose and value of goal setting. Later, the same student said that she already understood three of the learning outcomes; making it difficult to write a specific goal for that if she already "got it." Together these findings indicate the need to provide students with a clear a foundation regarding goal setting (i.e., embracing the struggle of unknown, extending one's learning, and setting challenging yet attainable goals).

Difficulty using the rubric to improve goal setting. I also noted that students had difficulty connecting their goals to instructional scaffolds, such as the rubrics used throughout the course. I needed to keep reminding students each time there was rubric that they could and should reference it throughout our class time together. In the initial goal setting, reminders about the rubric resulted in all 13 students choosing to take advantage of the opportunity to take their goals homes with them to turn in during the next class for grading with the rubric (Appendix D).

I also wrote in my journal about my frustration in needing to continually remind students that their goals could be improved through self-evaluation using the provided rubric. Yet,

students continued to comment that they did not reference the rubric. One student said that during the first goal setting attempt at the beginning of the semester, she did not even pull the rubric out. During her second goal setting attempt at midterm, she said she pulled the rubric out, but did not look at it. As the instructor for the course, I expected students to use the rubric to improve their performance on a graded requirement; however, this did not appear to be the case. This requires further inquiry as to why students did not use the rubrics as a method to help reach their goals and how I can more successfully teach the behavior of regularly referring to the rubrics as a method of self-evaluation and improvement.

Difficulty with establishing an appropriate timeframe. A finding that repeated itself throughout the journal was student difficulty in identifying an appropriate timeframe for their goals and growing understanding that this was a problem. One student reflected at midterm that, "some goals <she had written> were too high for this short amount of time." A second student said that, "my goals were not measurable for a semester timeframe." A third student said that she had, "a lot of goals still pending" that she was worried about reaching. Upon additional questioning for clarity, she said that half of her goals were complete and half of her goals were pending. When I followed up with her, she asked for help rewriting one of the goals that did not suit the learning outcome and the semester work. Yet, even after this session, I made anecdotal notes that she still had difficulty and would not "firm up" a timeframe. She said that in general she agreed with all her goals and that she could keep doing what she was doing and ultimately she will meet all the goals without any specific timeframe provided. A fourth student offered a similar explanation and said, "My goals are vague but I'm happy as long as I achieve all of them." We went over "vagueness" in relation to categories on the goal setting rubric (Appendix D), but she said that she thought there was no need to revise or rewrite goals, and instead she

would “just not give up or get lazy because the semester will come to an end eventually.” These statements reinforce the earlier finding that students had difficulty understanding the purpose of goal setting. In addition, these findings suggest that some additional clarification and instruction on short-term and long-term goal setting may be helpful to students struggling with setting a specific timeframe. The benefit of setting challenging yet attainable goals is that, in fact, students meet their goals and set new goals to keep their learning progressing forward.

Difficulties in goal setting. Per anecdotes journaled, the written reflections the students completed at the end of the semester in May continued to reinforce the struggles they had with goal setting practices. Students wrote that they struggled with their focus on wanting to pass the class, get a specific grade, and/or make it to graduation, and not on specific learning goals. One particular student commented that she had goals to complete at her job but not with her practicum work because that would be the instructor’s job. Another student directly stated, “This assignment was so difficult because honestly I never looked at the learning outcomes on the syllabus before.” Another student said, “Goal writing was tremendously hard at first, but I thought I improved on measurable and attainable goals.” A student did note that she finally realized that her goals were not measurable for a semester timeframe, but said that she is still not looking at the rubric before completing assignments. As a first attempt at formal goal setting, the students made progress, but as expected still had some difficulties related to the progress. A positive to this is during their final reflection, they were aware of these struggles, and may be attributed to an increase in their metacognitive awareness. The negative is that in fact they were left with some difficulty in the progress still as instruction for the semester was coming to a close.

Improvements in goal setting. My journal provided some evidence that student questions about goal setting became more refined and targeted from the beginning of the semester to midterm. For example, a student asked the question, "Is a goal measurable if it can't be seen but can be asked personally about?" Although it may seem like a minor point, my reflective notes mentioned that I cannot remember a time when a student asked a clarifying question about any goal. To me, this question was an indication that the student was thinking about improvements to their goals setting in terms of how to write (or rewrite) them. I also noted that in passing students made comments that it was "easier" to refine and rewrite some goals after establishing the routine of class and the schedule of their practicum placements. Three students stated explicitly that they originally set goals that were not meant for completion this semester (even through the rubric addressed the time frame). However, at midterm each one rewrote goals that would be better suited to achieving within the time left in the semester. From my perspective as the instructor, I recorded my impression of these improvements as students referencing the course outline more than I had been aware of in the past. By midterm they appeared to have more autonomy with writing goals and were more comfortable with the difficulty and struggle they experienced at times earlier in the semester.

Student perception of utility of goal setting. The anecdotal journal records provide evidence that a few students found goal setting to be useful. I recorded comments from two students who explicitly verbalized that goal setting helped improve their learning process. They were able to note where they were headed, what goals were met, what goals were in progress, what goals needed to be amended, and what goals were not met to date. In my journal, I wrote about one student who commented in class that she liked goal setting because she liked knowing where she was going in her learning and that by the end of the semester she would be there if she

worked toward those goals. I also wrote a direct quote from one student who said to me, "I had never documented my goals on paper before, but it challenged my learning." This statement is consistent with the literature that the formal development of challenging yet attainable goals structures a student's learning and motivates their progress with engaging in the learning process to meet their goals.

Additionally, 7 of the 13 students used their final reflections to report their goal writing experience contributed to their personal success. One student stated that she exceeded her own expectations of achievement. Another student said that, "I am taking away from this experience to be a more intentional and reflective teacher in what I am doing." A third student said that, "meeting goals showed growth as a teacher and it was about that more than any one particular event or experience by itself." These positive accolades highlight the recognition students have for the benefit of goal setting and reflection on their learning. A student said during a consultation that, "there is way more to know and learn than I ever thought at the beginning." This deep reflection and metacognitive awareness actively stimulates student progress in the learning cycle.

Improvement in metacognitive awareness/decrease in "I did not" comments. The Metacognitive Awareness Inventory for Teachers (MAIT, Appendix C) was completed at the beginning of the semester, at midterm, and at the end of the semester. At the beginning of the semester to the midterm of the semester, my journal indicates students made "I did not" comments such as, "I did not know," "I did not think," and "I did not understand." I found that I made notes of these comments along with possible support avenues for instructional planning with notion that students mentioned that they never formally asked for clarification from the professor, or a peer in class.

However between midterm and final, I found student comments in the journal that included statements during instruction like, “I have an understanding of how this will fit into my work,” and “I was able to think about it before doing it first.” Other students in the class made statements that included, “My thoughts of “I don’t know” began to disappear,” and “I went from feeling I am not sure to feeling sure about what I think and what I do.” One student had a moment of success with a course concept she has been struggling with and as we talked about her growth, she said, “I just thought about it and got it from my head.” Another student said, “I thought about it and then physically did something about it.” This was during an activity where she had to align her lesson plan with the appropriate early learning standards. She was conflicted and verbalizing her struggles with applying the early learning standards. However after she paused for a moment, she then physically pulled the standards up on her cell phone and looked at them. She finished with, ‘this is something I had not done before.” This act of stopping and thinking about thoughts and actions as a means to progress forward in learning is an intentionally reflective act to meet her goal as supported through the use of metacognitive awareness.

At the end of the semester when the students were reflecting on their practicum experiences, one student said, “I stopped and thought about why I handled a situation with a student’s question the way I did.” She continued to verbalize that she stopped and thought, “was this student’s question important,” “did I address it directly or brush it off,” and “could I do something differently.” This student think aloud was a deliberate use of metacognitive awareness, and verbally highlighted the student thinking about their thoughts and then acting on them.

Instructional Efforts to Scaffold Learning

Instructional insight through reviewing students' initial goal setting. As the instructor, I noted that it helped me to read the student's individual goals by allowing me to tailor my teaching to whole group and small or individual needs more confidently. One thing I made note of in my initial review of the students' goals was that 8 of the 13 students wrote goals to improve and expand on their ability to craft lesson plans. This was meaningful, because lesson planning is a large component of this course, especially after midterm when they are planning and implementing lesson plans independently in their practicum placement. In response to these goals, I used instructional time to address developmentally appropriate practice, first conceptually, and then practically as it relates to lesson planning. We also spent time as a whole class discussing ways to discover and incorporate young children's interest and experiences as a motivator to learning. Following this in-class work, I had made note that "several" students commented that using the PA early learning standards as a guide to implementation was helpful in making the connection between conceptual and practical understandings of developmentally appropriate practice.

Also during the initial goal setting, 5 of the 13 students wrote they wanted to review developmental theory as a way to prepare for their hands-on teaching experience. In response, I opened up the last ten minutes (announcing that more time could be given after class as needed) for anyone interested in a theorist review session. There were a small group of students who stayed. As I looked at their goals set, 3 of the students who wrote this goal stayed, and one who did not initially identify this as a goal also joined the small group session. I met at a later date and time with the other 2 students to review the theoretical components individually.

Balancing whole group, small group, and individualized instruction, is an important aspect of instruction. Explicit and timely review of the goals that students set helped me to manage these instructional needs and make the most of the instructional time together. Additionally, I noted that students took advantage of learning opportunities that were aligned with their formal goal setting.

Specific scaffolding instruction and learning

Throughout the semester, I journaled about several student struggles. These led to instructional decisions and targeted scaffolding strategies. Therefore, the journal serves as a record of the scaffolding I engaged in to support the learning goals of the course and the students. The scaffolding strategies I used are as follows: building on prior knowledge and experience, question and answer sessions, think-pair-share, modeling, think aloud, rubric reminders, and one-on-one consultations. These are described within the context of the journal recordings in the following section.

Building on prior knowledge and experience. One strategy was building on prior knowledge and experience. I noted the importance of reminders for students to stop and think about what they know and how they apply it to their teaching practices. I had also noted the importance of reviewing concepts, theories, standards, and/or expectations. I prompted them to utilize the theoretical and content knowledge from the program to think about their practicum coursework. This was faded as the semester progressed from a theoretical to practical application of teaching practices.

Question and answer sessions. A second strategy was holding question and answer sessions. These occurred in a face-to-face dialogue format and through electronic discussions via the Blackboard platform. Students commented afterward that the questions being asked by

their peers and their instructor were a valuable component of this process. The students stated that the questions were a key to their success of working through their thoughts and actions personally. Question and answer sessions were held throughout the semester. As a general practice, this is a strategy that I have never tried to fade, as time spent at their practicum site provides an opportunity for students to think about and question their educational experiences. These question and answer sessions are used to problem solve situations as well as extend student thinking and learning.

Think-Pair-Share. A third strategy was the in-class think-pair-share experiences. The students commented that having an opportunity to "think" and make note of their thoughts about the topic that day before discussing was beneficial. Then to "pair" with one or two of the peers in the class before the "share" with the whole group helped them sort their whole group discussion points and feel more confident about their contributions as a whole. Student feedback centered around this as instructional activity as supportive to their learning process. These sessions are held primarily in the first half of the semester, and this semester was not an exception.

Modeling. A fourth strategy was modeling. Although I modeled my own reflective practices by journaling and making instructional decisions based on consideration of these reflections in relation to my instructional goals, students may not have been consistently aware I was doing this. As a beginner to research, I held back explicitly discussing my active role, as to avoid undue influence on students comments and actions. Reflecting back, I do feel modeling my reflective practices for this research with the students could have been an effective learning strategies in modeling.

Instead, modeling was used most explicitly when I modeled how to handle potential scenarios as posed by students in the class. These were cases that a student was faced with in their practicum placement and had struggled to handle. As the semester progressed, the students had the opportunity to model for peers how to handle various circumstances through the utilization of real world case studies and examples. The students commented that the possible actions and solutions they had an opportunity to model and role play with others were relatable and replicable in their practicum placements. Students noted that they gained confidence from working through in a controlled environment. They reported on the modeling in the classroom as having a powerful transferability to their real-world classroom implementation. This strategy was faded out in whole group instruction after midterm, but was used for instructional purposes when students asked about preparing to teach or handling a situation, and modeling helped to illustrate an approach.

Think aloud. The fifth strategy was "think aloud." Students commented that this strategy was helpful in formulating thoughts and building confidence in the community college classroom and in the classroom of their practicum placement. This was literally taking the opportunity to "think aloud" an idea, problem, or solution during class. Students were given the opportunity to do "think aloud" independently or in groups and at times the instructor integrated this as a modeling technique as well. The think aloud technique was faded as the semester progressed and only used if an individual student needed support thinking through a concept or situation.

Rubric reminders. The sixth strategy was introduced earlier in student difficulties and focused on using reminders to use the rubric for self-evaluation and improvement. Two students in particular spoke out about their lack of rubric use. One student said, "I just want to know if I

am getting a good grade in the course." The other student said she just focuses on what her grade is and not how she gets it." I reported earlier that this support was not able to be faded as time progressed. Throughout the semester, the review and reminder of the use of a specific rubric for grading remained constant and was not faded.

One-on-one consultations. The final strategy was the one-on-one consultations between the instructor and the community college students. The majority of students reported that the individual meetings were critical to their own practicum success. The reasons given could be divided into two categories. The first category was to receive answers to practical experience questions. One student said that there is way more to learn, know, and do as a teacher than they ever thought, and they felt like they had questions all the time. The second category was to reduce fears about their own teaching practices within their practicum placement. Student said that at time they were overwhelmed, scared, lacked confidence, and were overall worried about their teaching practices. With each category, the students said that talking everything out in an individual meeting was reassuring and calmed many of their concerns. Since these occur primarily during the second half of the semester, there was no plan to fade this strategy during this course.

Summary of Qualitative Findings

Qualitative findings indicate that students improved in goal setting as a formal practice even though there was evidence of struggle in regards to the unfamiliarity of the goal setting practice itself. Students also struggled defining a time frame to achieve their goals, and did not reference the rubrics, even with reminders. However metacognitive awareness improved from the "I did not" statements of the first half of the semester to the "I can" statements of the second half of the semester as students reported on their reflective thoughts. The goal setting and

reflective practices within the course were helpful to the instructor. Each provided an opportunity for the instructor to support student learning and effectively use strategies to support achievement of the students in the practicum course.

Discussion

Design of Research

From the start, this study aimed to improve the educational actions and decisions of the researcher currently teaching in the early education and child development program at the community college level. Therefore, a major strength of this study is that the researcher analyzed data tailored to the specific students within the designated population. The aim was to expand and improve instruction based upon knowledge gained from this specific research. The research made instructional decisions for upcoming practicum courses offered, as well as extended the instructional practices into other courses taught within the program.

Student Goal Setting

In the goal setting practices, the students were most successful at being specific and measurable which were focuses of the instruction at the start of the semester. Our coursework focuses on the "specific" category in a variety of different avenues from observational reporting, to lesson plans and objective writing. Students' first practicum experience is focused strictly on observational reporting, and this practicum starts with some observation as a transition to become knowledgeable about their practicum sites. Since students prepare to write the lesson plans they will implement, instructional time was used to review how to write specific and measurable objectives for their teaching. It appears that this skill was transferable, and students were able to use what they learned from writing objectives to write specific and measurable goals for themselves. It is encouraging to see data that supports that the students applied this

knowledge to their own goal setting practices. In future courses, the connection between writing objectives for students and goals for one's self will be intentionally taught.

In contrast, students struggled with making goals relevant and setting appropriate time frames for achieving goals. They had noted their struggle with these were two fold. The majority admittedly did not initially read over the Goals Rubric nor did they review it after they wrote their goals. This remained a struggle throughout the semester, and even when I used direct instruction (e.g., explicit reminders and instructions); students did not master the skill of using the rubric. The findings indicate a need to find a more successful approach to teaching this skill.

I also noted a struggle to make classroom connections to the real world during their goal setting and reflective practices. The ability to take the course learning outcomes and translate them into their own learning and teaching practice was a struggle at times. It seemed as if the students would struggle to see where the learning outcomes would fit into their experiences in their practicum site. These struggles are consistent with the theory-practice gap evident in the early childhood education field, as well as other professions per the literature review, and this struggle with forming goals relevant to using what they know about as "best practice" in class can be a key to closing the knowing-doing gap.

The other struggle students had was in judging what a reasonable time line would look like for the goals they wrote. The boundary of the timeframe within the semester and post-semester was a struggle for students as they worked to balance course requirements with the routine, schedule, and planning of their practicum placement. They felt a "safe" response was to exclude a time period all together or to use a broad timeframe such as, "by the end of the semester." This broad approach is a fault to the goal setting process as a whole. Without a measureable timeframe, it can compound the problem of managing goals and reaching or

achieving the set goals. This time management in goal setting is an interesting piece of goal setting to explore in future studies.

However, although students were least proficient in "timely", their efforts to manage the semester coursework in class and at their practicum site can be seen in the significant improvements they made. By midterm they had a clearer measure on the goals they set and the time left to meet the needs of the remaining goal tasks at hand. In the future, and knowing their struggle with using the rubric as a to reference, I believe it would be beneficial to have students explicitly connect their course outline, course calendar, and practicum placement calendar as a reference in setting a time frame for goals.

Student Reflection

In terms of reflection, the community college students were most proficient in relevance. I believe this is because students have had the opportunity to reflect informally through their current work. Instruction normally began with an emphasis on how the day's learning opportunities would be relevant to both their learning in the practicum class and at their practicum site when they are teaching. They were able to think reflectively in their writing about how the goals could be appropriate to their learning, even if they struggled through the formal goal setting process.

Although the rubric reflection results showed that students were least proficient in interconnections and self-criticism, they made significant improvements in these areas as well. In general, my experience has been that students struggle to connect their prior coursework and experiences to a current real world classroom. The practicum experience is one that allows them the opportunity to do so for an extended time throughout the semester. Based on my past observations of this difficulty in interconnectedness and self-criticism, I spent time in class

reviewing how prior learning and experience applied to what their individual experiences were in their current practicum site. In previous courses, students spend only 10 hours in the field and although this contributes to learning course-specific content, the time period is short in comparison to the 120+ hours they spend during this course. In addition to the length of time students spend in the field, I meet with them weekly help expand on what they had learned, what they were learning, what they were experiencing in the field, and what positive and negative scenarios they encountered. This instructional practice gave students an opportunity to confront their assumptions, discuss them in our class time together, and plan how to react to them. With goal setting being a newer skill to undertake, they commented on challenges they faces in this area of assumptions about their own teaching and learning goals.

Overall, student reflections showed significant improvements in all areas, demonstrating that with instructor scaffolding, students can make large improvements in reflection. Although the students improved in some areas of goal setting, they did not make the consistent improvements they made with reflection. One of the reasons for this may lie in better scaffolding of reflection over goal setting. As demonstrated by the reflective journal, the instructor modeled her own reflection on teaching as well as scaffolded students' ability to reflect on field experiences more often than she was able to model and scaffold goal setting. The instructor found it to be easy to include modeling reflection in most learning opportunities, and students significant improvements show benefit from these experiences.

Metacognitive Awareness of Teaching

The Metacognitive Awareness Inventory for Teachers (Appendix C) indicated an overall increase in the community college students' metacognitive awareness from the beginning of the semester to the final. However, there were also data supporting that the significant

improvements in metacognitive awareness occurred from the beginning of the semester to midterm. This warrants more exploration in future studies. There is more scaffolding of instruction present during this time period and researching the correlation that may be present here would be valuable to improvements of teaching practices.

An instructor can use this knowledge to capitalize on their community college students' ability to use their higher order thinking skills. When instructors know there is significant improvement in how students "think about their thinking" they can use this information to benefit their students' learning. Increasing proficiency with metacognitive awareness can be used to build other skills students can use to be successful in their learning. Instructors who can capitalize on the increased metacognitive awareness students are using a tool to aid in their areas of struggle as well. When students can think metacognitively about they know it can strengthen their ability to think about what they struggle with in specific areas of their learning. Being metacognitively aware of struggles in can increase their capability as a student, and strengthen overall learning.

However, as the instructor and researcher, I did not capitalize on improving metacognitive awareness in this study to the best of my ability because with the use of the metacognitive awareness inventory as a formal part of my research. I was hesitant to openly discuss the students' metacognitive awareness in an effort to avoid direct influence on this study. I did not want to be a direct factor of undue influence and/or persuasion. This is perhaps a missed opportunity due to my attempt to maintain the role of the researcher.

However, it is important to note that the experiences in this course served to increase students' metacognitive awareness despite the instructor's concerns. This was particularly evidence in the movement from the "I did not" to the "I can" statements that were journaled

about. This indicates that the development of the student's metacognitive awareness was supported in the learning process in some capacity. Finding ways to empower students' and engage them in ownership of improvement in their own learning and teaching practices is a tool worth investigating in future research.

Teaching Presentation: Student Self-Evaluation and Instructor Evaluation

From a practical application position, the data gathered through the teaching presentations provided valuable instructional information. Within the ten categories of the teaching presentation rubric (Appendix F), there were eight areas were the instructor and student scores aligned. The two categories where there was not alignment provide interesting discussion points. These two areas were in the category of evidence of preparation and in professional reflection. The reason behind these two areas might be for a number of reasons. As previously discussed, the first reason might be that the students have admitted to not reviewing the rubric prior to submitting their work.

Another reason may be because of the students knowing what they have accomplished in preparing for the lessons they taught but not including it in what they have actually written and orally reported. As the instructor, I grade what I observe and read from an individual student. If they do not share this information, then it does not contribute to their rubric score. During this research, I met with the students before planning. This was either because I requested a specific meeting with them or if they requested to meet for a one-on-one consultation during their lesson preparation. After lessons were taught and written assignments were submitted for grading, I met with each of the students individually. For the future, having a thorough discussion in regards to the exact grading rubric while meeting with the early education and child development student during and after their planning may contribute to improvement in this difficult area.

The most variable category from the teaching presentation rubric was the use of early learning standards. This variability may have roots in the two different campus locations that were used in this data collection. The one campus has a consistent full time faculty member who uses continuity from course to course as students move through the program. The use of learning standards, professional reflection, and the NAEYC standard analysis is an integral part of the course work throughout the program. The other campus has had a great deal of instructor turn over both during and between semesters. Students have struggled with the lack of consistency in instruction and have noticeable deficits in specific skills that should be built upon as a student progresses through the early learning and child development program. Although this is addressed with administration each semester budgetary constraints remain a major factor to lack for full time employment for departments.

Instructor's Journaling

The qualitative analysis of the journal entries helped in the quantitative analysis of this research. When researching ways to engage in positive improvement practices, I believe a mixed methods approach gives two possibilities to compare and contrast when exploring topic(s) for investigation. I felt this research was one such instance. Our program at the community college embraces the use of rubrics for grading and that was a natural choice of quantitative data. However, I also felt it was important to collect qualitative data to study what may not be captured by the rubrics (i.e. scaffolding techniques) and yet come up through the partnership that is built through quality teaching between the student and the instructor. This qualitative component of instructor journaling provides insights to the scaffolded strategies of the quantitative data collected. The educational experience is a dynamic interaction between

knowledge, actions, and the work of the individuals it engages. My reflective journaling hoped to capture any aspect of this complexity with my instruction.

The most difficult aspect of the journaling was balancing the teaching and the research. In hindsight, I wish I would have used more of the information I wrote down throughout the semester in a timely way to improve instruction. A difficulty I had as a new researcher was feeling that I needed to avoid pre-analysis of my journal entries, but wanting to act upon some of my reflections right away. This feeling of attempting to stay away from jumping to conclusions or overanalyzing the information I was writing about held me back reflectively in some of my teaching in this course. I found it constructive to keep a formal record of my reflective thoughts, teaching experiences, and scaffolding strategies. I have continued to do this as a beneficial improvement practice. However, I now more confidently use information I reflectively write in a more immediate fashion to inform my own teaching practices and support student learning.

The aim of expanding and improving instruction based upon knowledge gained through this research was a positive experience. As the instructor, I gained insight into the goal setting and reflective practices of the community college's ECD students. I also collected data on their increase of metacognitive awareness as the semester progressed. As the literature supports, these are tools to improve students' learning and influence their teaching practices as they themselves enter the early learning profession. With positive changes at the community college level, the generative impacts that follow should be significant as well, especially in regard to personal growth and professional success.

CHAPTER IV: GENERATIVE IMPACTS

Professional Implications

Within the professional teaching and learning community, there are generative impacts of this research generally within the community college setting and specifically the early childhood education program. This research to improve my own profession practice has theoretical and instructional implications that guide and support the next steps of improvement. Last my leadership agenda is a derivative of this work and my commitment as an educator to be a lifelong learner

Community College

As discussed, the community college population is complex and often students come from more varied backgrounds than those enrolled at traditional four-year institutions. I believe it is my job as a community college instructor to work hand-in-hand with our diverse student population on their educational journey. As a full-time instructor, I view my position in this research as one of a team advocate. I trust that this instructional practice keeps me honest in my actions, so that when faced with a systematic problem, I was constantly reminded of my duty. With each decision, I maintained the center of my practice - the students themselves. This meant that approaching this problem would occur in the same manner.

Early Childhood Education

In addition, the specific population of community college students enrolled in the early childhood education program is underrepresented in research literature. While there is ample research available about community colleges in general and about early childhood education at the four-year institution level, relatively few studies have examined two-year programs devoted to early childhood education. So as an early childhood professional, I felt it was a matter of

social justice to studying this specific population. As the literature shows, quality early learning is critical to young children, so learning more about the population of early childhood educators who provide service to them from 2-year institutions is equally critical. These real-world implications of community college students in an ECD program and their own learning needs drove the approach to this research. The data collected in this research provides a starting point to learning more about the ECD students at the community college level, but this is just one study. Additional research should continue to look at the development of metacognitive awareness of students as they use goal setting and reflective practices in their own learning as a means to narrow the theory-practice gap present in the early childhood field.

Theoretical Implications

When assessing metacognitive awareness of students through their goal setting and reflective practices, the task is complex, but one of significance for improvement over time to occur. Metacognitive awareness is complex, and thus difficult to build and support as a stand-alone construct. However, when grounded through goal setting and reflective practices, instructors and students have a meaningful way to approach developing metacognitive awareness for learning and teaching.

Goal setting and reflective practices should have high priority in the learning process. These are worthwhile priorities to community college students in the ECD program. In general, it is necessary to set goals for one's work and it is essential to be a reflective practitioner. Specifically, these components go hand in hand as a student studying in the early learning and child development field benefits from goal setting and reflection in both their own learning and in structuring the learning for young children. In addition, as the literature supports that community college students more generally have a deficit in learning how to learn, it may

explain their underachievement. The results and findings of this study supports that scaffolding goal setting and reflective practices can begin to improve that deficit. It is my responsibility as a leader to defend my role as a lifelong learner and demonstrate that instructional practices can always be improved upon.

Instructional Implications

When I reflect on this research, I think what speaks to me is the importance of instructional improvement to develop the skills of future teaching professionals. The development of metacognitive awareness in early childhood educators is valuable to the quality of their teaching and mine. Teachers need to think about how they think and learn and transfer that knowledge into pedagogical action. I must teach and model this within my instruction to engage students in the learning process.

Therefore, I also need to continue to challenge myself as an instructor to build goal setting and reflection elements into my teaching as well as include others in the professional improvement process. To me, I see this as a way to strengthen our understanding of others' perspectives and knowledge, and to reinforce our own professional growth. I need to more thoroughly highlight and support these skills for my students as imperative to our educational agendas. Doing so not only has implications for equitable change in the higher educational system at the community college level, but doing so in the early childhood programs has potential for equitable change in childcare and classroom settings.

Next Steps

It is important to remember that this is only one Plan-Do-Study-Act cycle. It is only one step in the improvement process. I found the Plan-Do-Study-Act cycle beneficial because of the careful, methodical, and incremental approach to improvement that lends itself well to the

semester schedule of instruction. It allows for frequent and consistent efforts toward positive change. I look forward to taking the knowledge I have gained in relation to my own teaching practices and apply it to future changes within the courses I teach.

Further, as a leader, it is critical to share this research to contribute to positive and lasting changes in our early education and child development program. I am fortunate to teach with individuals at the community college level who are committed to the betterment of our instructional practices. Our collaborative work is invaluable and I look forward to leading our forward growth.

The next steps for the early education and child development program are to scale up and apply improvement practices across the community college level in this same course. Two of the four campuses were involved in this research, and this was because I was the instructor at two sites. My fellow instructors need to be a part of the planning so that we can implement at all four campuses. In addition, the scaffolding of goal setting and reflective practices earlier within the program is another future step in my instructional agenda. There is also another practicum course that focuses on observation and assessment prior to the capstone course. By expanding the research to include another course earlier in the program for comparison would be another avenue to pursue for improvement practices.

Leadership Agenda

As a lifelong learner, it is important for me to continue to strengthen the art and science of my teaching practices. As an educator, it is part of my work to evaluate and improve upon my instruction to reciprocate the improvement upon our community college students' learning. This ripple effect impacts young children and the quality of their education as these community college students enter the work force. As I look toward my future, I see this research

contributing to my leadership agenda. Although sharing professional insights from our own teaching is beneficial, having sound data to shape our practice is essential. This concrete foundation enables confident leadership among colleagues and peers.

As described above, I look forward to improving my teaching from what I have learned through this research by taking the next steps in sharing these results and findings amongst those teaching in the early education and child development program. However, I think it could also be valuable to share the scaffolding of goal setting and reflective practices across other disciplines at the community college level. Reaching the needs of community college students is a priority across disciplines and departments and sharing data for professional growth and development is part of my leadership agenda. Lastly I look forward to continuing my inquiry into improvement.

Conclusion

Overall, this research experience has taught me about my teaching, my community college students' learning, the value we all contribute to the quality education of young children, and the importance of systematic changes for positive improvement. It was a daunting task, but a worthwhile endeavor, and one that continues. Advocating and acting on behalf of effective change is a driving effort of educational equity and excellent in my leadership agenda. This research has helped me to better recognize one aspect of positive improvement for change in an overarching system. It has opened my eyes to the wealth of knowledge out there yet to learn, and has given me hope for a community of learners that will ultimately impact the future of the young children they will teach. The research has helped me know that as a leader of change, the time to lead for continuous improvement is now.

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Appendix A
Early Education and Child Development Programs at CCAC

American Sign Language (912.3)

NORTH
Certificate

The certificate in American Sign Language (ASL) provides language training and cultural enrichment for people who wish to learn ASL and the uniqueness of Deaf culture. This program will not prepare students to become interpreters but is designed to introduce students to the language and culture. This program is particularly useful for parents of Deaf children and students pursuing careers such as allied health, nursing, early childhood education and teaching, where clients may be Deaf. The program is designed to allow students to complement their degrees with an ASL certificate offered as a part-time program. Fourteen of the ASL credits within the certificate are transferable to the Educational Interpreting associate's degree program.

Upon successful completion of the program, the graduate will:

1. Apply basic language skills to produce ASL in a variety of ways in order to communicate effectively with Deaf adults and children who depend on visual representations of English for communication.
2. Pass the American Sign Language Proficiency Interview (ASLPI) which is based on the following linguistic areas: pronunciation, grammatical accuracy, vocabulary, fluency and comprehension.
3. Use classifiers through directionality, word signs, noun placements and non-manual signals.
4 Produce intermediate receptive comprehension and expressive information.
5. Recognize the diversity of the Deaf culture through theory discussion, guest speakers and local events.

First Semester		Credits
ASL-101	Elementary American Sign Language 1	4
ASL-104	Visual Gestural Communications	3
		7
Second Semester		
ASL-102	Elementary American Sign Language 2	4
ASL-109	Deaf Culture	3
		7
Third Semester		
ASL-201	Intermediate American Sign Language 1	3
		3
Minimum Credits to Graduate		**17**

Child Care (655.3)

ALLEGHENY, BOYCE, NORTH, SOUTH
Diploma

This program is designed for individuals who desire entry-level positions in the area of child development. By enrolling in specialized courses designed for working with infants, toddlers and preschool-age children, students learn about the physical, emotional, social and cognitive care of infants, toddlers and preschoolers. They learn the job responsibilities of all staff working in the field and identify suitable career opportunities.

Weekly field observations and experiences are required throughout the coursework in this program. Students must be eligible for clearances through the Federal Criminal History Record (Act 114), Pennsylvania State Police Criminal History Check (Act 34) and the Pennsylvania Department of Public Welfare Child Abuse History Check (Act 115) and meet local requirements of the field placement site.

Upon completion of the diploma, students may work as an aide in child care agencies or centers, preschool programs, before and after school programs or private homes. Students who complete the diploma program, find employment in a child development center and meet additional credential requirements are eligible to apply for the nationally awarded Child Development Associate (CDA) credential through the Council for Professional Recognition. Additional CDA credential requirements and application can be found at **www.cda.org**.

Upon successful completion of the program, the graduate will:

1. Integrate appropriate theories and practices, general and content knowledge and professional and pedagogical knowledge to create and implement developmentally appropriate experiences for children and their families.
2. Employ appropriate discipline terminology and professional tone in written and oral communication in descriptive and applied observation and documentation strategies to positively influence children's growth and development.

(continued)

Child Care (655.3) (continued)

Students can apply the credits earned in this diploma program toward a certificate or associate's degree in Early Education and Child Development. Upon completion of this program, graduates may seek employment as a preschool teacher or as an early childhood educational aide and can work in child care agencies, day care, preschool programs, public and private schools, before and after school programs or private homes.

Diploma Requirements

One Semester		Credits
ECD-101	Introduction to Early Education & Child Development	3
ECD-105	Early Childhood Development: Birth to Age 6	3
ECD-107	Health & Safety of Children	3
Minimum Credits to Graduate		9

Child Development (623.4)

ALLEGHENY, BOYCE, NORTH, SOUTH
Diploma

This program is for individuals who desire only specialized courses designed for working with infants, toddlers, preschoolers and school-age children. Students receive specialized training in the physical, emotional, social and cognitive care of infants, toddlers, preschoolers and school-age children. They learn the job responsibilities of professionals and identify suitable employment situations and career opportunities.

Upon successful completion of the program, the graduate will:

1. Integrate appropriate theories and practices, general and content knowledge and professional and pedagogical knowledge to create and implement developmentally appropriate experiences of children and their families.
2. Employ appropriate discipline terminology and professional tone in written and oral communication in descriptive and applied observation and documentation strategies to positively influence children's growth and development.
3. Work with children of diverse ages and abilities and their families by participating in supervised practicum experiences in multiple types of inclusive child care and educational environments.

Students can apply the credits earned in the diploma program toward a certificate or associate's degree in Early Education and Child Development. Upon completion of this program, graduates may seek employment as a preschool teacher or as an early childhood educational aide and can work in child care agencies, day care, preschool programs, public and private schools, before and after school programs or private homes.

Weekly field observations and experiences are required throughout the coursework in this program. Students must be eligible for clearances through the Federal Criminal History Record (Act 114), Pennsylvania State Police Criminal History Check (Act 34) and the Pennsylvania Department of Public Welfare Child Abuse History Record Check (Act 151) and meet local requirements of the field placement site.

(continued)

Child Development (623.4) (continued)

Diploma Requirements

First Semester

ECD-101	Introduction to Early Education & Child Development	3
ECD-105	Early Childhood Development Birth to 6	3
ECD-135	Practicum: Observation & Assessment	3
		9

Second Semester

ECD-107	Health & Safety of Children	3
ECD-212	Language, Literacy & Literature for Early Childhood	3
	Restricted Elective[1] (1)	3
		9

Minimum Credits to Graduate: 18

[1]Restricted Electives

ECD-113	Middle Childhood & Adolescent Development	3
ECD-202	Children With Special Needs	3
ECD-214	Curriculum for the Early Childhood Classroom	3

Children With Special Needs (624.4)

ALLEGHENY, SOUTH
Diploma

The Children With Special Needs diploma is designed primarily for individuals who are employed and seek specific skills for advancement or for students who work in community agencies that provide parent training, behavioral intervention and other types of support for families having children with special needs. Students gain skills for working with diverse populations through both classroom work and supervised practicum experiences. Individuals can also enroll in this diploma program to gain specialized parenting skills.

Upon successful completion of the program, the graduate will:

1. Integrate appropriate theories and practices, general and content knowledge and professional and pedagogical knowledge to create and implement developmentally appropriate experiences for children and their families.
2. Employ appropriate discipline terminology and professional tone in written and oral communication in descriptive and applied observation and documentation strategies to positively influence children's growth and development.
3. Find community resources to support families and their children's development, learning and well-being.

Students can apply the credits earned in the diploma program toward a certificate or associate's degree in Early Education and Child Development. Weekly field observations and experiences are required throughout the coursework in this program. Students must be eligible for clearances through the Federal Criminal History Record (Act 114), Pennsylvania State Police Criminal History Check (Act 34) and the Pennsylvania Department of Public Welfare Child Abuse History Record Check (Act 151) and meet local requirements of the field placement site.

Upon completion of this program, graduates may seek employment as staff in agencies that provide services for children with special needs such as Easter Seals or as a family day care provider. Graduates may also seek employment as house-parents, group home workers, TSWs (therapeutic support workers), child care workers or as a respite care worker.

(Continued)

Children With Special Needs (624.4) (continued)

Diploma Requirements

First Semester		Credits
ECD-101	Introduction to Early Education & Child Development	3
SOC-101	Introduction to Sociology	3
SOW-130	Community Resources	3
		9

Second Semester

ECD-135	Practicum: Preschool or Special Needs	3
ECD-202	Children With Special Needs	3
ECD-210	Clinical Skills With Children **or**	3
ECD-211	Family Systems **or**	3
		9

Minimum Credits to Graduate **18**

Criminal Justice & Criminology (600.6)

ALLEGHENY, BOYCE, NORTH, SOUTH
Associate of Science

This program prepares you to work in a public or private agency in law enforcement or corrections.

Upon successful completion of the program, the graduate will:

1. Identify each component of the criminal justice system and explain its purpose and function.
2. Recognize the functional operation of the juvenile justice system and identify moral dilemmas in the criminal justice field.
3. Explain the components of a law or statute and apply the United States Bill of Rights to the operation of the criminal justice system.
4. Describe the budgetary process and staffing levels of a criminal justice organization.
5 Describe the variety of methods used in evidence collection and identify the courtroom value of physical and testimonial evidence.

Police officers protect the lives and property of individuals by working in municipal police departments, county sheriff departments and state highway patrol stations. Uniformed police officers have duties such as maintaining regular patrols and responding to calls for service, directing traffic, investigating a burglary and building relationships with the citizens of the community to mobilize them to help fight crime through community policing.

The corrections option prepares students to work as correctional officers or prison guards to maintain security and prevent escapes by individuals who have been arrested and are awaiting trial or who have been convicted of a crime and sentenced to serve time in a jail, reformatory or penitentiary. Graduates work for a local, state or federal agency in corrections and criminology.

The computer forensics option offers specialized and cross-disciplinary knowledge and skills necessary for performing professional duties as computer forensic examiners/technicians, analysts and auditors in law enforcement agencies or private environment security. Students selecting this track will be required to have a prerequisite of *CIT-100 Computer Fundamentals & Applications* and submit to a criminal background check.

(continued)

Drug & Alcohol (414.1) (continued)

Diploma Requirements

First Semester		Credits
SOC-101	Introduction to Sociology	3
SOC-117	Understanding Chemical Dependency	3
PSY-101	Introduction to Psychology	3
		9

Second Semester

PSY-230	Counseling the Addict	3
SOC-118	Drug & Alcohol Clinical Practicum	3
	Restricted Elective[1]	3
		9

Minimum Credits to Graduate 18

[1]Restricted Electives

ETH-101	Ethnic & Diversity Studies	3
ETH-112	Understanding Violence in America	3
ETH-114	Achieving Cultural Competence	3
SOC-212	Social Problems	3
SOW-101	Introduction to Social Work	3
SOW-106	Interviewing Skills	3

Early Childhood Director Core Certificate (654.3)

ALLEGHENY, BOYCE, NORTH, SOUTH
Diploma

This program is designed for individuals who work in early childhood and child development and wish to apply for the Director Credential as identified by the PA Key to increase the knowledge and understanding of the role of the child care and school-age director as defined in Section 3720.34 and 3720.241(c), Commonwealth of Pennsylvania Child Day Care Regulations and to meet the requirements of the Keystone STARS continuous quality assurance program at the STAR 3 level.

Upon successful completion of the program, the graduate will:

1. Integrate appropriate theories and practices, general and content knowledge and professional and pedagogical knowledge to create and implement developmentally appropriate experiences for children and their families.
2. Identify core values and ethical behavior standards of the profession by exercising sensitivity, professionalism, confidentiality and competency when interacting with children, families, co-workers, community representatives and policy agents.
3. Find community resources to support families and their children's development, learning and well-being.
4. Employ appropriate discipline terminology and professional tone in written and oral communication in descriptive and applied observation and documentation strategies to positively influence children's growth and development.

To begin this coursework, students must:

1. Have an associate's or bachelor's degree in early childhood education, child development, special education, elementary education or the human service field.
2. Have an associate's or bachelor's degree in any other field, including 30 hours of early childhood, child development, special education, elementary education or the human service field.
3. Be eligible for clearances from the Pennsylvania State Police Criminal History Check and the Department of Public Welfare Child Abuse History Check. Additionally, if required by a field/practicum site, students will need to obtain the FBI Criminal History Record Check (Act 114).

(continued)

Early Childhood Director Core Certificate (654.3) (continued)

The student must complete three, three-credit courses that are not included in any other associate's or bachelor's degree. The program can be completed in one, two or three semesters. Graduates can be directors of early childhood, child development, infant/toddler or school-age programs.

After completion of these courses, candidates will make separate application to the PA Key and should obtain information to meet additional requirements of candidacy. (www.pakeys.org)

Diploma Requirements

First Semester	Credits
Restricted Elective[1]	3
Second Semester	
Restricted Elective[1]	3
Third Semester	
Restricted Elective[1]	3
Minimum Credits to Graduate:	9

[1]Restricted Electives

BUS-240	Small Business Management	3
ECD-202	Children With Special Needs	3
ECD-214	Curriculum for the Early Childhood Classroom	3
ECD-218	Child Care Management & Administration	3

Early Education & Child Development (621.5)

ALLEGHENY, BOYCE, NORTH, SOUTH
Associate of Science

This program prepares students for an entry-level position working with infants, children, adolescents and their families in a variety of settings and for transfer to a Pre-K–4 teacher certification program.

Students learn about best practices in direct care and education, diversity when working with children and their families and techniques for working with children who have special needs. Through classes, weekly field observations and practicums, students learn about professionalism, human development, health, mental health, infant and child care agencies, family relationships, laws and regulations governing the welfare of children and their families and community resources available for working with children and their families.

Upon successful completion of the program, the graduate will:

1. Integrate appropriate theories and practices, general and content knowledge and professional and pedagogical knowledge to create and implement developmentally appropriate experiences for children and their families.
2. Work with children of diverse ages and abilities and their families by participating in supervised practicum experiences in multiple types of inclusive child care and educational environments.
3. Identify core values and ethical behavior standards of the profession by exercising sensitivity, professionalism, confidentiality and competency when interacting with children, families, co-workers, community representatives and policy agents.
4. Find community resources to support families and their children's development, learning and well-being.
5. Employ appropriate discipline terminology and professional tone in written and oral communication in descriptive and applied observation and documentation strategies to positively influence children's growth and development.

Students must be eligible for clearances through the Federal Criminal History Record (Act 114), Pennsylvania State Police Criminal History Check (Act 34) and the Pennsylvania Department of Public Welfare Child Abuse History Record Check (Act 151) and meet local requirements of the field placement site.

(continued)

Early Education & Child Development (621.5) (continued)

Career opportunities exist in infant/toddler centers, home-family support roles, early childhood programs, nursery schools, preschool programs, before- and after-school programs, private and public schools, hospitals, therapeutic day care and residential centers, group homes, community living arrangements and private homes.

Upon completion of this program, students may seek employment as a child care practitioner or an early childhood educator.

This program is the career and program-to-program transfer program for Early Education & Child Development. Students who plan to continue on to a teacher certification program should meet with an advisor or transfer counselor to discuss this educational goal. Graduates achieving a minimum of 3.0 GPA may choose to earn a bachelor's degree in Early Childhood Education with Pre-K–4 Teacher Certification. Teacher certification candidates must successfully pass the required PRAXIS exams.

Degree Requirements

First Semester		Credits
ECD-101	Introduction to Early Education & Child Development	3
ECD-105	Early Childhood Development: Birth to Age 6	3
ECD-107	Health & Safety of Children	3
ENG-101	English Composition 1	3
PSY-101	Introduction to Psychology **or**	3
SOC-101	Introduction to Sociology	3
		15

Second Semester		
ECD-135	Practicum: Observation & Assessment	3
ECD-212	Language, Literacy & Literature in Early Childhood	3
ENG-102	English Composition 2	3
HIS-104	US History 1	3
MAT-107	Mathematics for Elementary Education[1] **or**	3
MAT-190	Contemporary Mathematics **or**	4
MAT-195	Business Mathematics	3
		15–16

Third Semester		
ECD-202	Children With Special Needs	3
ECD-211	Family Systems	3
	Humanities Elective[2]	3
	Science/Lab Elective	3–4
	Social Science Elective[3]	3
		15–16

Fourth Semester		
ECD-214	Curriculum for the Early Childhood Classroom	3
ECD-240	Practicum: Pre-K–4	3
ECD/SOW	Restricted Electives[4]	3
	Mathematics Elective[5] **or**	3–4
	Science Elective	3–4
	Humanities Elective[2]	3
		15–16

Minimum Credits to Graduate **60–63**

[1]Required for TAOC program-to-program transfer. Check with CCAC Counselor regarding transfer process.

[2]Humanities are restricted as follows:
3 credits of Literature
3 credits of either Art, Music or Theatre

[3]Recommended for Social Sciences for Program to Program transfer:

ANT-101	Introduction to Anthropology **or**	3
HIS-101	History of Western Civilization **or**	3
GEO-101	World Geography	3

[4]Restricted Electives

ECD-113	Middle Childhood & Adolescent Development	3
ECD-210	Clinical Skills With Children	3
ECD-218	Child Care Management & Administration	3
EDU-205	English Language Learners[1]	3
SOW-120	Child Welfare	3
SOW-130	Community Resources	3

[5]Required for program-to-program transfer

MAT-110	Mathematics for Elementary Education 2	3

Early Education & Child Development (622.4)

ALLEGHENY, BOYCE, NORTH, SOUTH
Certificate

This program is primarily for students who work with children and/or their families. It provides theoretical and practical information enabling students to develop job skills for working with infants, toddlers, school-age children and their families. Students learn the developmental needs of children and developmentally appropriate activities for children of various ages. Students receive the training in the physical, social, emotional and psychological needs of children. Information on children with special needs and the impacts on their families are included in the program along with an emphasis on diversity and the professionalism needed for working with children and their families. Students become aware of the effects of social conditions on the development of children and study the laws and regulations pertaining to children and agencies that work with them.

Upon successful completion of the program, the graduate will:

1. Integrate appropriate theories and practices, general and content knowledge and professional and pedagogical knowledge to create and implement developmentally appropriate experiences for children and their families.
2. Work with children of diverse ages and abilities and their families by participating in supervised practicum experiences in multiple types of inclusive child care and educational environments.
3. Identify core values and ethical behavior standards of the profession by exercising sensitivity, professionalism, confidentiality and competency when interacting with children, families, co-workers, community representatives and policy agents.
4. Find community resources to support families and their children's development, learning and well-being.
5. Employ appropriate discipline terminology and professional tone in written and oral communication in descriptive and applied observation and documentation strategies to positively influence children's growth and development.

Students can complete the certificate before pursuing a degree program. Courses in the program are also helpful for parents.

Students must be eligible for clearances through the Federal Criminal History Record (Act 114), Pennsylvania State Police Criminal History Check (Act 34) and the Pennsylvania Department of Public Welfare Child Abuse History Record Check (Act 151) and meet local requirements of the field placement site.

Completion of this program enables students to work in child care centers, family day care homes, schools, agencies serving students with special needs or as in-home child care professionals. Graduates may seek employment as a day care assistant, nanny or as a early childhood educational assistant.

Certificate Requirements

First Semester		Credits
ECD-101	Introduction to Early Education & Child Development	3
ECD-105	Early Childhood Development: Birth to 6	3
ECD-107	Health & Safety of Children	3
ECD-135	Practicum: Observation & Assessment	3
	Restricted Elective[1] (1)	3
		15
Second Semester		
ECD-202	Children With Special Needs	3
ECD-211	Family Systems	3
ECD-240	Practicum: Pre-K–4	3
	Restricted Elective[1] (2)	6
		15
Minimum Credits to Graduate		**30**

[1]Restricted Electives

ECD-210	Clinical Skills With Children	3
ECD-212	Language, Literacy & Literature in Early Childhood	3
ECD-214	Curriculum for the Early Childhood Classroom	3
ECD-218	Child Care Management & Administration	3
SOW-120	Child Welfare	3
SOW-130	Community Resources	3

Appendix B

DUQUESNE UNIVERSITY
600 FORBES AVENUE ♦ PITTSBURGH, PA 15282

CONSENT TO PARTICIPATE IN A RESEARCH STUDY

TITLE:
Building Metacognitive Awareness and Authentic Teaching Practices through Scaffolding Goal Setting and Reflective Practices in ECD Majors at the Community College Level

INVESTIGATOR:
Melanie Renee Yeschenko, Early Education & Child Development Associate Professor, Community College of Allegheny County, Doctoral Candidate, Duquesne University

ADVISOR:
Dr. Amy M. Olson, Assistant Professor, School of Education, Department of Educational Foundations and Leadership, Duquesne University; 412-396-5712

SOURCE OF SUPPORT:
This study is being performed as partial fulfillment of the requirements for the doctoral degree in Educational Leadership at Duquesne University.

PURPOSE:
You are being asked to participate in a research project that seeks to investigate improvement to instruction for early education and child development (ECD) majors in a community college setting. The goal of this study is to allow the students to gain content knowledge while becoming more able to practice effective pedagogy in early learning classrooms. Specifically, this study examines ways to develop and improve the metacognitive skills of the ECD students as a means to improve their intentional practice.

In order to qualify for participation, you must be at least 18 years of age to give your consent to participate and be currently enrolled in the practicum course ECD 240P.

PARTICIPANT PROCEDURES:
To participate in this study, you will be asked to allow the instructor of ECD 240P to use information from your regular assignments to explore the research questions. These assignments include a survey of metacognitive awareness to teaching three times throughout the semester, a description of your learning goals, reflection on your goals, an observation of your teaching, and a one-on-one meeting with the instructor to discuss and reflect on your teaching. You will be asked to complete these assignments as part of the course. By consenting to participate in the research, the instructor will be allowed to analyze your assignments after grades have been

submitted. All student data collection will be from activities and assignments that are a part of regular course instruction, and no additional requirements beyond regular course requirements will be requested. The instructor will keep a reflective journal about her teaching experiences in the course (scaffolding attempts and outcomes), and will analyze her own reflections from this journal. No students will be identified in this journal.

RISKS AND BENEFITS:
There are no risks associated with participation in this study greater than those encountered in everyday life. The indirect benefits of participation in this study includes possible increased recognition of metacognitive awareness. Community college students enrolled in the course will remain in the course and fully participate even if they are not participating in the research.

COMPENSATION:
There will be no compensation or incentive for participation in this study. Participation in the research will require no additional monetary cost to participants.

CONFIDENTIALITY:
Your participation in this study and any personal information that you provide will be kept confidential at all times and to every extent possible.

All written and electronic forms of your assignments will be kept secure. Your assignments will be de-identified prior to use in the data analysis. Your responses will adhere to confidentiality and no one will be able to identify your individual responses. Any assignments with personal identifying information will be maintained for three years after the completion of the research and then destroyed.

RIGHT TO WITHDRAW:
You are under no obligation to participate in this study. You are free to withdraw your consent to participate at any time by verbal or written request to the instructor or the college representative at any point up until the semester ends on Monday May 16, 2016. The community college representative, Greg Joyce (department head) can be reached at 724-325-6781. Your consent to participate form will be returned to you or discarded in college shredder at your request. You will continue full participation in all course-related activities even if you opt out at any time during the semester. This will continue to have no impact on your status as an enrolled student in the course.

SUMMARY OF RESULTS:
A summary of the results of this research will be supplied to you, at no cost, upon request.

VOLUNTARY CONSENT:
I have read the above statements and understand what is being requested of me. I also understand that my participation is voluntary and that I am free to withdraw my consent for any reason up until the semester ends on May 16, 2016. On these terms, I certify that I am willing to participate in this research project.

I understand that should I have any further questions about my participation in this study, I may call Melanie Renee Yeschenko or Dr. Amy M. Olson 412-396-5712. Should I have questions regarding protection of human subject issues, I may call Dr. Linda Goodfellow, Chair of the Duquesne University Institutional Review Board, at 412.396.1886.

_____ _____

Participant's Signature Date

_____ _____

Researcher's Signature Date

Appendix C

Metacognitive Awareness Inventory for Teachers (MAIT)

The MAIT is a list of 24 statements. There are no right or wrong answers in this list of statements. It is simply a matter of what is true for you. Read every statement carefully and choose the one that best describes you. Thank you very much for your participation.

1 = Strongly Disagree 2 = Disagree 3 = Agree 4 = Strongly Agree

1. I am aware of the strengths and weaknesses in my teaching.	1 2 3 4
2. I try to use teaching techniques that worked in the past.	1 2 3 4
3. I use my strengths to compensate for my weaknesses in my teaching.	1 2 3 4
4. I pace myself while I am teaching in order to have enough time.	1 2 3 4
5. I ask myself periodically if I meet my teaching goals while I am teaching.	1 2 3 4
6. I ask myself how well I have accomplished my teaching goals once I am finished.	1 2 3 4
7. I know what skills are most important in order to be a good teacher.	1 2 3 4
8. I have a specific reason for choosing each teaching technique I use in class.	1 2 3 4
9. I can motivate myself to teach when I really need to teach.	1 2 3 4
10. I set my specific teaching goals before I start teaching.	1 2 3 4
11. I find myself assessing how useful my teaching techniques are while I am teaching.	1 2 3 4
12. I ask myself if I could have used different techniques after each teaching experience.	1 2 3 4
13. I have control over how well I teach.	1 2 3 4
14. I am aware of what teaching techniques I use while I am teaching.	1 2 3 4
15. I use different teaching techniques depending on the situation.	1 2 3 4
16. I ask myself questions about the teaching materials I am going to use.	1 2 3 4
17. I check regularly to what extent my students comprehend the topic while I am teaching.	1 2 3 4
18. After teaching a point, I ask myself if I'd teach it more effectively next time.	1 2 3 4
19. I know what I am expected to teach.	1 2 3 4
20. I use helpful teaching techniques automatically.	1 2 3 4
21. I know when each teaching technique I use will be most effective.	1 2 3 4
22. I organize my time to best accomplish my teaching goals.	1 2 3 4
23. I ask myself questions about how well I am doing while I am teaching.	1 2 3 4
24. I ask myself if I have considered all possible techniques after teaching a point.	1 2 3 4

Adapted from: Balcikanli, C. (2011). Metacognitive awareness inventory for teachers (MAIT). *Electronic Journal of Research in Educational Psychology*, *9*(3), 1309-1332.

Appendix D
SMART Goals Rubric

	3	2	1	0
Specific	Clearly focused on the desired outcome	Partially focused on the desired outcome	Desired outcome is unclear	Goal is unrelated – no stated outcome
Measurable	Will be measurable because the evidence to be provided will clearly indicate progress	Will be only partly measurable because the evidence to be provided will not clearly indicate progress	Evidence of progress will be provided, but will not indicate progress	Not at all measurable – no method of measurement indicated
Achievable/Ambitious	The goal is aligned with the learning outcome	The goal is mostly aligned with the learning outcome	The goal is partially aligned with the learning outcome	The goal is not aligned with the learning outcome
Relevant	The goal has a strong connection to the student's prior knowledge, experiences, strengths, needs, and/or continued growth	The goal has some connection to the student's prior knowledge, experiences, strengths, needs, and/or continued growth	The goal has only a slight connection to the student's prior knowledge, experiences, strengths, needs, and/or continued growth	The goal has no connection to the student's prior knowledge, experiences, strengths, needs, and/or continued growth
Timely	Has a definite date of what will be accomplished by this date. Is within the time frame of this semester	Has an indefinite date of what will be accomplished by this date yet is within the time frame of this semester	Has an indefinite date of what will be accomplished by this date AND has an unclear time frame by which the goal should be accomplished	Has no dates and/or is over a period of time far beyond this school year

Adapted from: SMART goals rubric (n.d.). Retrieved from http://www.mansfieldct.gov/filestorage/11169/11181/12429/SMART_Goal_Rubric.pdf

Appendix E
Reflection Rubric

	3	2	1	0
Clarity	The language is consistently clear, expressive, and abstract concepts are explained accurately. A reader can create a mental picture of the situation being described.	The language is frequently clear, expressive, and abstract concepts are explained. A reader can begin to construct a mental picture of the situation being presented.	The language is somewhat clear, expressive, and an attempt to explain abstract concepts is made.	The language is unclear and confusing throughout. Concepts are either not discussed or are presented inaccurately.
Relevance	The learning experience being reflected upon is consistently relevant and meaningful to student and course learning goals	The learning experience being reflected upon is frequently relevant and meaningful to the student and course learning goals	The student makes attempts to demonstrate some relevance, but is unclear	The learning experience is not reflected on or it is irrelevant to the student and/or the course learning goals
Analysis	The reflection is a consistent analysis of how the experience contributed to the student's understanding of self, others, and/or course learning	The reflection frequently attempts to analyze the experience contributed to the student's understanding of self, others, and/or course learning	The reflection makes some attempts to applying the learning experience to the understanding of self, others, and/or course learning	The reflection does not move beyond description of the learning experience(s)
Interconnections	The reflection consistently demonstrates specific connections between the learning experience and material from the course; past experience and learned material;	The reflection frequently demonstrates some connections between the learning experience and material from the course; past experience and learned material;	There is some attempt to demonstrate connections between the learning experience and material from the course; past experience and learned material;	There is no attempt to demonstrate connections between the learning experience and material from the course; past experience and learned material;

	and/or personal goals	and/or personal goals	and/or personal goals	and/or personal goals
Self-criticism	The reflection consistently demonstrates ability of the student to questions their own biases, stereotypes, and/or assumptions to define new modes of thinking	The reflection frequently demonstrates ability of the student to question their own biases, stereotypes, and/or assumptions	The reflection indicates some ability of the student to question their own biases, stereotypes, and/or assumptions	The reflection indicates no ability of the student to questions their own biases, stereotypes, and/or assumptions

Adapted from: Jones, S. (n.d.). *Using reflection for assessment.* Retrieved from https://vp.studentlife.uiowa.edu/assets/Using-Reflection-for-Assessment.pdf

Appendix F
Teaching Presentation Rubric

Criteria	3	2	1	0
Knowledge of subject matter	Demonstrated consistent knowledge of the subject matter	Demonstrates frequent knowledge of the subject matter	Demonstrates some knowledge of the subject matter	Does not demonstrate knowledge of the subject matter
Communication skills/clarity/ confidence	Demonstrates a consistent ability to communicate clearly and easily with the class, and is professionally poised and confident while presenting the lesson	Demonstrates a frequent ability to communicate clearly and easily with the class, and is professionally poise and confident while presenting the lesson	Demonstrates some ability to communicate with the class, and has some display of poise and confidence while presenting the lesson	Does not demonstrate the ability to communicate with the class, and is not poised and confident while presenting the lesson
Method of presentation	Demonstrates a consistent ability to use creative and effective teaching methods during the lesson	Demonstrates a frequent ability to use creative and effective teaching methods during the lesson	Demonstrates some ability to use creative and effective teaching methods during the lesson	Does not demonstrate the ability to use creative and effective teaching methods during the lesson
Voice	Speaks using a consistent volume level and clarity, and without repetition of words or phrases	Speaks using mostly consistent volume level, and with clarity and little repetition of words or phrases	Speaks using an inconsistent volume level and with some clarity; uses many repetitious words or phrases	Speaks using low volume level and is difficult to understand; uses many repetitious words or phrases
Visual contact	Demonstrates a consistent ability to maintain eye contact with the class throughout the lesson	Demonstrates a frequent ability to maintain eye contact with the class throughout the lesson	Demonstrates some ability to maintain eye contact with the class throughout the lesson	Does not demonstrate the ability to maintain eye contact with the class throughout the lesson
Evidence of preparation	Demonstrates a comprehensive ability to organize and execute the lesson	Demonstrates a thorough ability to organize and execute the lesson	Demonstrates some ability to organize and execute the lesson	Demonstrates no ability to organize and execute the lesson

Orderly sequence	The logical progression of the lesson topic is demonstrated consistently with the lesson easily flowing well from topic to topic and/or activity to activity	The logical progression of the lesson topics is demonstrated frequently with the lesson flowing from topic to topic and/or activity to activity	The progression of the lesson topics is slightly demonstrated with some of the lesson flowing from topic to topic and/or activity to activity	The lesson does not logically progress and does not flow from topic to topic and/or activity to activity
Use of early learning standards	The lesson is consistently accompanied by a full PA Early Learning Standard(s), as well as activity-specific learning objective(s) which is used to articulate priorities for high quality, meaningful experiences in each content area with desired outcomes for children that connect with professional standards	The lesson is accompanied by a PA Early Learning Standard(s), as well as learning objective (s) which is used to articulate that experiences in each content area are developmentally appropriate with desired outcomes for children that connect with professional standards	The lesson is accompanied by a PA Early Learning Standard(s) and/or learning objective(s).	The lesson does not include a PA Early Learning Standard and a Learning objective
NAEYC standard analysis	NAEYC Standard and Key Element are both identified. NAEYC Standard Analysis refers specifically to what the student has learned from this specific teaching experience pertaining to the targeted Standard	NAEYC Standard and Key Element are both identified. NAEYC Standard Analysis refers to what the student has learned pertaining to the targeted Standard	NAEYC Standard or Key Element are identified. NAEYC Standard Analysis makes reference to what the student may have learned pertaining to the targeted Standard or Key Element	NAEYC Standard and/or Key Element are not identified AND/OR NAEYC Standard Reflection does not refer to what the observer has learned pertaining to the targeted Standard, or is not included

Professional reflection	Student's reflection on teaching lesson shows consistent understanding of the theories and research underlying the early childhood field's focus on content, and makes clear and specific connections between prior learning experiences and this learning experience. Includes in-depth, probing question(s) for future inquiry.	Student's reflection on teaching lesson shows knowledge of the theories and research underlying the early childhood field's focus on content, and makes a connection between prior learning experiences and this learning experience. Includes question(s) for further inquiry.	Student's reflection on teaching lesson mentions theory and research in reference to prior learning and/or includes question(s) for inquiry.	Student's reflection on teaching lesson does not mention theory and research in reference to prior learning and does not include question(s) for inquiry.

Adapted from: *Teaching presentation rubric* (n.d.). Retrieved from http://www.eiu.edu/assess/HST%20Teaching%20Presentation%20Rubric.docx

Appendix G
Looking Ahead

Looking Ahead: Goals to Share
Name: Course: ECD 240P Spring 2016 Set Date/Time: Reflect Date/Time:
Course Learning Outcomes: ☐ 1. Apply appropriate theories of growth and development. ☐ 2. Document practical "hands-on" work experience with children, ages birth to 9 and their families. ☐ 3. Observe and document children's behavior and development. ☐ 4. Employ ethical and professional practice in attitude, behavior and communication. ☐ 5. Demonstrate written and verbal competency in observation reporting. ☐ 6. Use observation and assessment data to plan experiences and environments for children that reflect their interests, abilities and learning styles. ☐ 7. Construct NAEYC standards-based educational portfolio with appropriate artifacts.
Goals: ☐ 1. ☐ 2. ☐ 3. ☐ 4. ☐ 5. ☐ 6.

☐ 7.
Questions to ask: ☐ 1. ☐ 2. ☐ 3. ☐ 4. ☐ 5. ☐ 6. ☐ 7.
Additional Notes: